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A CASE OF SEVERE *B. COLI* INFECTION OF THE
URINARY TRACT; NEPHRECTOMY; RECOVERY.

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THE patient was first seen by me on December the 31st, 1912, in consultation with Dr. Dottridge, of Godalming, to whom I am indebted for full notes of the case. Dr. Thursfield had also seen the case one week previously, and I had the advantage of his opinion when considering the advisability of an operation.

A girl, aged 7 years, became acutely ill on December the 5th, 1912, and complained of headache and sore throat, with pain on the right side of the chest and abdomen. Up to this time she had been in good general health. She had always been constipated since birth, the bowels seldom being opened without medicine. For two years there had been some urgency of micturition, and for the last six months occasional incontinence of urine had been noticed in the daytime only.

By December the 8th there were definite signs of pneumonic consolidation at the right base, with a temperature of 104.8° F. and a pulse of 120.

The abdominal pain had disappeared and there was no tenderness

or rigidity of the abdomen. The spleen was palpable. Urine acid, specific gravity 1018; no albumin or turbidity. On December the 10th the urine, although still quite clear, contained a trace of albumin, and on the 13th, when the temperature fell by crisis, there was pain in the front of the left loin, and on the next day pain in the right loin. The abdomen was distended and there was marked enlargement of the spleen, but no tenderness could be elicited. Blood examination showed 10,000 leucocytes and 3,000,000 red corpuscles.

On December the 15th more definite urinary symptoms developed. Micturition became very frequent and painful, with occasional incontinence. There were constant pain, tenderness and rigidity in the right loin, but no symptoms on the left side.

The urine was alkaline and offensive, contained a fair amount of pus, and gave a pure growth of typical *B. coli communis* on culture. An autogenous *B. coli* vaccine was given, but this state of affairs, with a nightly rise of temperature to 104° or 105° F., continued until December the 31st, when I first saw the patient (Fig. 1.)

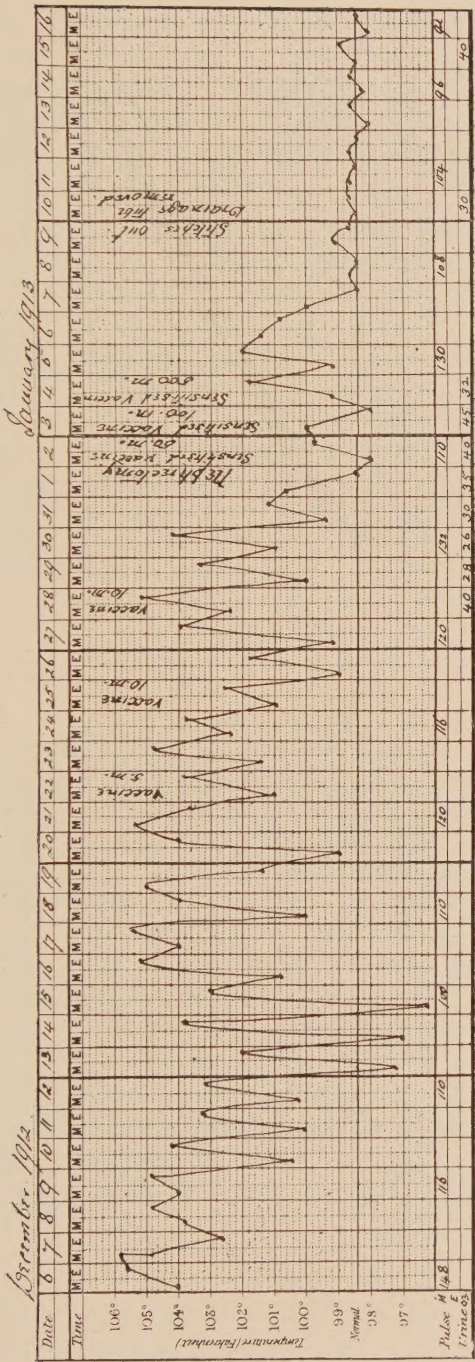
At that time the general condition was bad. The physical signs at the right pulmonary base had cleared up, but the pulse was feeble and intermitting with the heart apex-beat well outside the nipple line. There was muscular rigidity in the right loin, and next day, under an anæsthetic, the right kidney was definitely palpable and tender.

On January the 1st, 1913, the right kidney was exposed by the usual lumbar incision, and nephrectomy performed as quickly as possible. There was much œdema of the peri-nephric tissues. The kidney was about one and a half times its usual size, was much engorged, and showed on its surface numerous small whitish areas. These areas varied in size between a pin's head and a shilling, were definitely raised above the surface, and were surrounded by a deep red blush of congestion (Fig. 2).

The extra-renal pelvis and upper three inches of the ureter were not dilated or tortuous, and, except for some dilated vessels running on their surfaces, appeared natural.

The child made a good recovery, and except for a rise in temperature on the fourth, fifth and sixth days after the operation, due to absorption from the deeper parts of the wound, her subsequent progress gave little further anxiety. The only real trouble was a most obstinate constipation with the passage of very offensive motions. This eventually reacted to drop doses of tinct. iodi and oil of izal, and by February the 27th, nearly two months after the operation, the

Fig. 1.



patient had "almost" completely recovered. This reservation is necessary, because, although her general condition was good and the wound soundly healed, the urine, although clear, still yielded a growth of *B. coli* on culture.

In many of these cases of *B. coli* infection of the urinary tract, the symptoms for a time may be slight or even absent altogether, so that it is impossible to be certain of the exact site of the initial invasion. Moreover, although attention is often directed to the condition by symptoms of bladder irritation, it does not by any means follow that the real trouble is situated in that viscus. As in cases of renal tuberculosis, so here, cystoscopic examination of the ureteric orifices at the time of onset of symptoms may clearly point to disease, already of some duration, in one or both kidneys.

I suggest that in this case there had been a quiet infection of some part, or the whole, of the urinary tract for the two years during which the patient had suffered from urgency of micturition and occasional incontinence, and that the extra strain thrown upon the kidneys by the attack of pneumonia determined the infection of their parenchyma with organisms derived from their already infected calices. Whereas the disease in the left kidney to a large extent underwent resolution, the lesion on the right side, reinforced by a further invasion of virulent organisms from the hepatic flexure of the colon, progressed to the stage found at the operation. Some lesion of the colon was undoubtedly present at this time, and the much more intimate anatomical relation of the colon to the right kidney may have determined the stress of the disease falling upon this, the commonly affected side.

REMARKS BY DR. THURSFIELD.

The foregoing case presents several points of interest. Cases in which the kidney has been opened or removed during an acute attack of pyelo-nephritis are few in number. I have been able to find two recorded by W. M. Jeffreys in the 'Quarterly Journal of Medicine,' 1911, iv, p. 267. In a child, aged 6 months, who was suffering from an infection with Gaertner's bacillus, the left kidney was opened and drained and the child made a good recovery (Case XLIX). In a girl, aged 8 years, the right kidney was removed after she had had a severe attack of pain and swelling in the left kidney. The kidney removed is described as "large, with numerous pale areas beneath the capsule." The child left the hospital in good general health. In another case also mentioned



FIG. 2.



the kidney was opened and nothing abnormal detected. In these it is clear that the infective process had not progressed to the stage reached in the case under consideration, where the whole kidney was a mass of abscesses distributed equally in the cortex and medulla, but they are of interest as showing the extent of damage which is compatible with good recovery. In the first two there can be no doubt that both kidneys were involved. In a fourth case reported by Jeffreys, at an autopsy several months after the end of the attack, the right kidney was found atrophied and adherent to the perinephric tissues, while the left, though scarred, had undergone hypertrophy.

Histologically there was nothing to distinguish the lesions in the kidney which was removed from Mr. Wilson's patient from those which are common in the kidney of "ascending nephritis." There were a number of abscesses both in the cortex and medulla, and the tissues of the kidney were infiltrated throughout with inflammatory cells. The organism isolated from the kidney after removal differed slightly from that found in the urine during the course of the attack, the latter giving the sugar reactions characteristic of the "classical" *B. coli*, while the former fermented saccharose bile-salt media and did not affect lactose bile-salt broth. In all other respects it resembled *B. coli communis*.

The diagnosis in such cases is always difficult, especially since it is certain that in some of the most acute infections the urine remains normal for some time after the onset of the fever. Why this should be so is not quite clear, but the changes which the urine undergoes in the course of an attack suggest a possible explanation. I have seen on two or three occasions during an attack the fever disappear with a copious discharge of pus, and a little later the urine become absolutely free from pus while the temperature rises again to a considerable height. Such a course suggests strongly that there is a temporary block in the ureter damming back the pus in the dilated pelvis and ureter. In cases where I have had the opportunity of examining the urine bacteriologically during the period of freedom from pus I have always been able to obtain a copious growth of the infecting organism. In the case under consideration the first urinary symptoms were not observed till the end of a week, and examination of the urine during this time showed it to be free from turbidity. When I had the opportunity of seeing the patient the diagnosis had already been made. At that time, at the end of the second week, the only physical sign of the disease was a tenderness in the right loin. I thought it probable that improvement would

take place soon, but that if there were none in a few days it would be necessary to consider surgical interference. After seeing the condition of the kidney, which Mr. Wilson removed a week later, I am clear that I was mistaken. That recovery is possible, after a severe lesion of the kidney, is clear from the case mentioned above, in which an atrophied kidney was found at the autopsy, but I find it difficult to believe that in that instance the inflammation had ever reached such an advanced stage as in this patient.

Another obscure point in the pathology of this disease is the reason for the special liability of the right kidney. That this is the case is, I think, clear from the statistics of Jeffrey, who found that the right was affected only, or first, three times as often as the left. If one accepts the view that the infection reaches the pelvis of the kidney from the intestine direct across the intervening tissue, the more intimate relation of the colon to the right kidney would suffice to explain the greater liability of that side. But there are difficulties in this view, especially as in a considerable number of patients the symptoms of cystitis precede those of pyelitis, and the much greater liability of girls is easier to explain on the hypothesis of an ascending infection.

Whatever the explanation of this peculiarity, it is certain that the bulk of the patients are suffering from some intestinal trouble; perhaps constipation is the commonest, but in infants under two years of age the affection is very apt to follow an acute attack of diarrhoea. In two cases the inflamed appendix has been found lying in close relation to the pelvis of the kidney; both of these were chronic infections, liable to recurrent attacks of pyuria.

Lastly, the atrophy of the kidney, which had been the seat of a purulent infection, suggests a possible explanation of those cases where the kidneys are found atrophied and scarred in patients, especially girls, who die at or soon after the age of puberty. It is possible that these atrophic organs represent the traces of an attack of pyelo-nephritis during infancy or early childhood. I am convinced from my own observations that such attacks may be the explanation of some of the unexplained fevers of infancy and childhood, and that they are often of a character so mild, that unless special attention is directed to the urinary tract they may be undiagnosed. I have elsewhere called attention to the striking resemblance which some of the more chronic cases bear to "cyclic vomiting."

A CASE SIMULATING MENINGITIS IN WHICH THE SYMPTOMS WERE CAUSED BY THE ESCAPE OF THREAD-WORMS INTO THE PERITONEAL CAVITY THROUGH A PERFORATED APPENDIX VERMIFORMIS.*

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A GIRL, aged $5\frac{1}{2}$ years, was admitted into the Oxford County Hospital in May, 1910, with the diagnosis of tuberculous meningitis, seeing that a year previously an enlarged gland had been removed from the side of her neck.

On examination she seemed very ill, had a temperature of $102\cdot4^{\circ}$ F. and a pulse-rate of 112. There was marked converging strabismus, with contraction of both pupils and some photophobia. Her mother stated that for thirty-six hours or more she had been sick, was restless, and now and then screamed out when apparently dosing. She was very constipated, and an enema had produced but a small result. She slept badly and often refused food; any attempt at drinking brought on immediate vomiting. She had urinary incontinence. There was no disease of the ears or air-sinuses.

For the first two days after admission her condition and symptoms remained about the same, but after this she began to pick at the bedclothes, to throw herself about in bed in a restless, irregular manner, and to wet herself more frequently. At this period I noticed for the first time that she kept her right lower limb fully flexed and drawn up to the abdomen, whilst she moved the left from time to time, often extending it.

Palpation of the lower abdomen gave the impression of increased rigidity in the right rectus muscle, and caused her to call out when even gentle pressure was brought to bear over the cæcum. There was no distinct dullness on percussion anywhere. The existence of these physical signs on the right side together with the increasing sickness, quickening pulse, and general weakness determined me to explore the region of the appendix. The mother readily assented to the operation, and under complete ether narcosis I operated, utilising the McBurney or gridiron incision.

When the peritoneum was opened a small quantity of semi-purulent fluid escaped, emitting a fæcal odour. An inflamed process

* A paper read before the Section for the Study of Disease in Children of the Royal Society of Medicine on April the 25th, 1913.

of omentum was found covering in the anterior surface of the cæcum and the appendix completely. In peeling the inflamed omentum from the appendix I came upon a colony of about a dozen dead thread-worms. After the appendix had been cleared and delivered through the wound it was found to possess a pin-point perforation $\frac{3}{4}$ in. from its distal extremity on its mesial aspect. Through the minute perforation a living thread-worm was to be seen wriggling until it finally extruded itself on to a swab held to receive it. In quick succession three or four others of smaller size, and presumably of less mature age, passed in single file through the opening. The base of the appendix was crushed and ligatured, and the organ excised according to custom. The omentum was then drawn into the wound and carefully examined, and as a result three more live worms were removed from its meshes at some distance from the inflamed and previously attached portion. In swabbing the pelvic peritoneum with hot saline in search for others, four more live ones were caught and removed. The wound was then closed. The appendix when cut open was found to be crammed full of oxyurides of all sizes and ages. The very small and immature worms greatly predominated. The mucous membrane was considerably ulcerated, especially in the immediate neighbourhood of the perforation.

The opening was so small that a fully grown oxyuris squeezed itself through with decided difficulty. After the operation the nervous symptoms and sickness very soon disappeared, the pulse and temperature fell to normal on the following day, and from this time onwards the recovery was rapid and complete.

The case presents many points of interest, and amongst them may be enumerated:

(1) The difficulty in making a rational diagnosis in the first instance was increased by the existence of an almost positive tuberculous history on the one hand, and by the entire absence of any other known cause on the other.

(2) The nervous symptoms played such an important rôle, and the pain was so generalised at the first and subsequent examinations, that there was little to direct attention to the local focus in the lower abdomen.

(3) The only truly localising and diagnostic symptom was the continued flexure of the right lower limb.

(4) The imitation of a true organic nerve lesion or lesions by the reflex irritation produced by the active animalcules wriggling about on the exquisitely sensitive peritoneal surface.

(5) The immediate cessation of the urgent symptoms as soon as the cause had been removed.

(6) Especially interesting to the surgeon is the behaviour of the omentum in coming to the rescue in this case, as it so often does in others, by limiting and preventing the extension of local mischief. In this particular case it appears not only to have checked the peregrinations of many of the worms, but it seems to have actually killed them. The colony of dead worms was to all appearances enwrapped by the adherent omentum, and the individuals were held in bondage as it were in the immediate neighbourhood of their place of exit from the cavity of the appendix.

(7) The absence of infection as the result of the perforation in spite of the free escape of a foul semi-purulent discharge on to the peritoneal and wound surfaces. A drainage-tube was used only during the first twenty-four hours after the operation. The case is unique in the operator's experience, and he has neither heard of a similar case nor has he seen an account of one in surgical literature.

THE TREATMENT OF DIPHTHERIA BACILLUS CARRIERS WITH BOUILLON CULTURES OF *STAPHYLOCOCCUS PYOGENES AUREUS*.

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Historical note.—This method was first introduced in 1909 by Schiötz, of Copenhagen, who had observed that patients with staphylococcus sore throats admitted in error to diphtheria wards did not contract diphtheria, and that intercurrent attacks of staphylococcus sore throat expelled pre-existent Klebs-Loeffler bacilli in diphtheria convalescents. He accordingly inoculated six diphtheria bacillus carriers with a staphylococcus culture isolated from the throat of a patient in a surgical ward, who was healthy except for the condition requiring operation. Three of the patients were adults, and three children between eleven and thirteen years of age. In each case the cultures rapidly became negative.

H. Page, of Manilla, was the first to adopt Schiötz's method. After ineffectual use of ordinary throat sprays and repeated injections of antitoxin he found that two-hourly spraying of the throat with bouillon cultures of *Staphylococcus pyogenes aureus* rendered the throat free of bacilli in a few days. In a subsequent paper he

relates how he used the treatment on his own son in convalescence from severe diphtheria. Release from quarantine was delayed owing to timidity in using the spray, the cultures not being negative until seven days after treatment had been begun.

Catlin, Day and Scott, of Rockford, Illinois, next reported eight cases of diphtheria carriers, in whom they used this treatment after the ordinary methods of throat antiseptics had failed. A twenty-four hours' old broth culture was sprayed into the nose and throat three times daily, and all other treatment was stopped. The bacilli disappeared in from forty-eight to seventy-two hours.

Two cases were treated by Leary, of Melbourne. In the first the spray was used on two occasions, with an interval of two to three days. Several swabs taken sixty hours after this were negative, and further cultures taken from the posterior part of the throat five days after spraying showed only one bacillus. The second case showed negative cultures in forty-eight hours and again four days later.

Lydia De Witt, of St. Louis, carried out experiments to determine whether an antagonism existed between *Staphylococcus aureus* and diphtheria bacilli. Test-tube experiments showed that the organisms grew well together, and that a killed staphylococcus culture formed a good medium for the growth of diphtheria bacilli. Experiments on rabbits and guinea-pigs showed that though Klebs-Loeffler bacilli frequently disappeared more quickly in animals treated with staphylococcus cultures than in those untreated, this result was not constant. In two diphtheria patients whom De Witt treated with staphylococcus cultures the bacilli reappeared after two negative findings had been obtained. She suggested that the apparently favourable action of *Staphylococcus aureus* is due, not to an incompatibility between the two organisms, but to a reinforcement of the normal throat flora.

In a case in which diphtheria bacilli had persisted three and a half weeks from the onset of the disease, R. G. Wiener, of New York, used a throat spray three times a day, starting on December the 11th, 1911. On the 12th the culture was positive, and a spray with twice as heavy a culture was used. On the 13th the culture, though still positive, contained fewer organisms. A heavy culture was used every three hours this day. On the 14th staphylococci only were found in the culture. On the 18th, four days after the last spray, the culture was still negative.

Lieutenant G. B. Lake, of the United States Army Corps, treated thirteen convalescent cases in an outbreak of diphtheria at Fort

Sam Houston, Texas. The throats were swabbed once a day with the cultures, which were varied a good deal for purposes of experiment. Bouillon cultures from six hours to five days old, young broth cultures reinforced with two or three loopfuls of agar cultures, and suspensions in broth of agar cultures were all tried. The best results were obtained with bouillon cultures forty-eight to seventy-two hours old grown at incubation temperature.

In seventeen cases treated by W. F. Lorenz and M. P. Ravenel, of Madison, Wisconsin, a nasal and throat spray was used consisting of a fresh suspension of *Staphylococcus pyogenes aureus* in normal saline solution and a broth culture twelve hours old. Three were carriers pure and simple, six had had clinical symptoms, and eight had treatment early in the disease. The method was most successful in the carrier cases, and less so in the others.

A. J. Bell, physician to the Cincinnati Hospital, obtained a negative culture in two persistent carriers after forty-eight and sixty hours' treatment respectively. He recommends that a fresh staphylococcus culture should be prepared daily. The first application should be made by the physician, and the remainder of the culture should be used by the patient himself every two hours during the day.

This survey of the literature shows that comparatively few cases have been treated by this new method, the total number hitherto recorded amounting to barely over fifty. With the exception of Leary's Melbourne cases the observations have been confined to the United States, and so far no cases have been published in this country or on the Continent. Up till now no complications have been noted except by Lorenz and Ravenel, who mention coryza, very mild laryngitis and nasal furuncles occurring among their cases.

The simplicity, efficacy, and apparent harmlessness of the method induced me to make use of it in ten cases whose histories are given below. Four were adults and six children. Nine had had a mild and one a severe attack of diphtheria. In eight the fauces and in two the nose alone had been involved. All had reached an advanced stage of convalescence. In all but two the virulence of the organisms was tested at the Central Laboratory of the Metropolitan Asylums Board. The histories show that the results were successful in all the faucial cases and unsuccessful in the two nasal cases.

Method.—A pure culture of *Staphylococcus pyogenes aureus* having been obtained from the Central Laboratory, a broth tube was inoculated with two or three loopfuls of the culture and incubated for eighteen to twenty-four hours. The palate and fauces and in nasal cases the nostrils as well were sprayed three or four times a day.

The spraying was followed by applying swabs dipped in the culture to the tonsils and surrounding parts.

A culture was taken before each application, and the treatment was continued until a negative culture was obtained. A few days after cessation of treatment another culture was taken. If this proved positive, the spraying was resumed, otherwise the patient was discharged if the following culture was also negative.

In all but two cases a mild form of sore throat was produced within two to three days of starting the treatment—an occurrence not reported in any of the cases hitherto published—and was accompanied by more or less constitutional disturbance. A striking feature was the considerable degree of malaise, quite out of proportion to the temperature, which as a rule was but slightly raised. The symptoms, however, both general and local were of short duration, and were not followed by otitis or any other complication. The fatal issue of Case 8 cannot fairly be attributed to the treatment.

As the process entails some degree of discomfort it is well not to employ it until other methods have been tried, and it is for this reason that I did not make use of it in a larger number of cases, but confined it to the treatment of chronic carriers, in all of whom the bacilli had existed for more than six weeks. An exception must be made of Case 10, in whom the treatment was started on the twenty-fifth day, as her livelihood depended upon her early discharge from hospital. In all the rest the earliest date on which the spray was used was the forty-sixth day and the latest the seventieth.

It is advisable not to employ the method except at a late stage of convalescence for the following reasons. First, in the early stage before the mucous membrane has completely regenerated there is a danger of infection of the deeper tissues by the pyogenic organisms. So far no serious complications have resulted in man, but De Witt's experiments in rabbits and guinea-pigs show that the clinical symptoms of diphtheria are often more severe under staphylococcus treatment than otherwise. Secondly, the excess of mucus and detritus present in the throat during the acute stage prevents free access of the staphylococci to the parts, and affords a temporary shelter to the diphtheria bacilli. Thirdly, in hospitals where patients, owing to the possibility of complications, especially subsequent paralysis, are detained from four to six weeks, there is no need to use the method at an early stage, when the chance of the bacilli being present is much greater than late in convalescence.

In this connection De Witt's investigations as to the persistence of Klebs-Loeffler bacilli in the throat of diphtheria patients are of

interest. In 175 cases examined their duration was less than thirty days in 63 per cent., between fifteen and thirty-five days in 87 per cent., under fifteen days in only 12 per cent., and over forty days in 12 per cent.

In view of the futility of most other methods in ridding the throat of diphtheria bacilli the application of staphylococcus cultures is worthy of trial. It is superior to the endotoxin treatment recently advocated by Hewlett and Nankivell (*Lancet*, 1911, ii, p. 143), in that the culture is easily prepared and that no injections are required. Patients who wish to escape from irksome detention in hospital or quarantine at home should have the method explained to them and the possible discomfort they may experience. It will probably be found that they will readily submit to any treatment which is likely to obtain their freedom.

CASE 1.—Woman, aged 25 years. Admitted September the 24th, 1911, with mild faucial diphtheria. 8000 units of antitoxin given. Throat clean on September the 28th. November the 6th (forty-sixth day): Throat culture positive. Fauces normal. November the 13th: Virulent diphtheria bacilli in throat culture. November the 14th to 16th: Formamint lozenges four times daily. November the 16th: Culture still positive. November the 17th (fifty-seventh day): Staphylococcus broth culture, about eighteen hours old, sprayed on fauces at 11 a.m., 2 p.m., 5 p.m., and 7.45 p.m. November the 18th: Staphylococcus spray used thrice. November the 19th: Severe headache and malaise. Temperature normal. Speck on left tonsil. No diphtheria bacilli. A few rods without polar staining, but chiefly staphylococci. November the 21st: Sore throat. Specks on tonsils. Temperature 99.4° F. November the 22nd: Temperature normal. Culture negative. November the 23rd: Throat slightly injected. Culture negative. November the 24th: Throat normal. November the 25th: Culture negative. Discharged. The temperature was only raised on one day, and was not above 99.4°.

CASE 2.—Girl, aged 6 years. Admitted November the 3rd, 1911, with mild faucial diphtheria. 4000 units given. Throat clean on November the 4th. December the 14th (forty-sixth day): Culture positive. Tonsils large, fauces pale. December the 18th (fiftieth day): Virulent diphtheria bacilli in throat culture. December the 21st and 22nd (fifty-third and fifty-fourth days): Throat sprayed and swabbed with staphylococcus cultures morning and evening. December the 23rd: Fewer bacilli in culture. December the 24th: Bacilli still numerous. Treatment continued. December the 26th:

Culture negative. December the 27th: A few groups of diphtheria bacilli in culture. December the 28th and 29th: Treatment continued thrice daily. December the 30th and January the 2nd: Almost pure culture of diphtheria bacilli in throat. January the 4th and 5th: Throat sprayed and swabbed four times daily. January the 5th and 7th: Culture positive. January the 7th: Slight faucial injection. January the 8th, 11th and 12th: Cultures negative. January the 15th: Discharged. The persistence of diphtheria bacilli in this case was probably due to several factors: viz. enlargement of the tonsils, infrequent and inadequate use of the spray, and absence of any marked local reaction. There was no constitutional disturbance or rise of temperature in this case.

CASE 3.—Boy, aged 6 years. Admitted November the 9th, 1911, with mild faucial diphtheria. 4000 units given. Throat clean November the 10th. December the 19th (forty-seventh day): Culture positive. Fauces normal. December the 21st (forty-ninth day) and December the 22nd: Throat swabbed morning and evening with staphylococcus broth cultures. December the 23rd: Sore throat since last night. Fauces injected. Specks on right tonsil. Temperature 98° F. Only a few diphtheria bacilli in culture. December the 24th: Throat clean. December the 24th, 25th and 26th: Cultures negative. December the 28th: Discharged. The temperature was not raised, and no estimation of the virulence of the bacilli was made in this case.

CASE 4.—Man, aged 26 years. Admitted December the 28th, 1911, with severe faucial diphtheria. 12,000 units of antitoxin given. Throat clean January the 1st, 1912. February the 19th (fifty-eighth day): Throat culture contains virulent diphtheria bacilli. Fauces normal. February the 25th, 26th, 28th and March the 1st: Throat sprayed and swabbed with staphylococcus broth culture. February the 27th: Complains of sore throat. Fauces slightly injected, clean. Temperature 98.6° F. February the 28th: Throat no longer sore. Still some faucial injection. Temperature subnormal. Only a few diphtheria bacilli, mostly staphylococci in culture. February the 29th: Fauces injected. Specks on tonsils. Temperature subnormal. Culture still positive. March the 1st: Culture positive. Temperature 99.4° . March the 2nd: More deposit on tonsils. Pains in limbs. Temperature subnormal to-day and subsequently. Culture negative. Throat syringed four-hourly with potassium chlorate and lavender lotion. March the 4th: Throat clean. March the 4th, 5th and 7th: Cultures negative. March the 11th: Discharged. The temperature was only raised from

4.0 p.m. on March the 1st to 4.0 a.m. on March the 2nd, the highest record being 99.4° F.

CASE 5.—Woman, aged 53 years. Admitted April the 22nd, 1912, with mild faucial diphtheria. 8000 units of antitoxin. Throat clean on April the 24th. May the 21st (thirty-first day): Culture positive. Fauces normal. May the 28th (thirty-eighth day): Virulent diphtheria bacilli in throat culture. June the 5th (forty-sixth day) to June the 9th (fiftieth day): Throat sprayed and swabbed with staphylococcus broth culture. June the 8th: Slight faucial injection. June the 10th: Headache, malaise, specks on tonsils. Morning temperature 98.4° F., evening temperature 100.2° . No diphtheria bacilli, but only staphylococci in cultures. June the 11th: A few diphtheria bacilli, but chiefly staphylococci in cultures. Temperature $98-99.2^{\circ}$. June the 12th: Throat injected, but clean. No diphtheria bacilli, but only staphylococci in cultures. Temperature $98^{\circ}-98.4^{\circ}$. June the 13th: Headache and nausea. Tonsils swollen. Temperature $98-101^{\circ}$. June the 15th: Throat normal. Feels well. Temperature normal. June the 17th and 18th: Cultures negative. June the 20th: Discharged. The febrile period lasted from June the 10th to June the 14th, but the temperature never rose above 101° .

CASE 6.—Girl, aged 6 years. Admitted September the 12th, 1912, with mild faucial diphtheria. 8000 units of antitoxin given. Throat clean on September the 13th. October the 29th (fifty-first day): Cultures positive. Throat normal. October the 31st: Culture positive. Staphylococcus spray and swab applied to throat thrice daily. November the 1st: Treatment continued. November the 2nd: A few specks on tonsils. Fewer diphtheria bacilli in culture. Temperature subnormal. November the 3rd: Sore throat, nausea, malaise, specks on tonsils. Morning temperature, 101.4° F., evening temperature 100.0° . Culture negative. November the 4th: Specks on tonsils. Nasal discharge. Morning temperature 99.2° , evening temperature 101° . November the 5th: Throat clean. Nasal discharge almost ceased. Nasal culture negative. Morning temperature 98° , evening temperature 99.8° . November the 6th: No nasal discharge. Temperature subnormal this day and subsequently. November the 8th, 14th and 15th: Cultures negative. November the 18th: Discharged. The temperature was raised for three days, the highest record being 101.4° . No estimation of the virulence of the bacilli was made in this case.

CASE 7.—Boy, aged 7 years. Admitted October the 17th, 1911, with mild nasal diphtheria. 4000 units of antitoxin given. Novem-

ber the 20th (fiftieth day) : Throat culture negative, nasal culture positive, no nasal discharge. November the 27th (fifty-seventh day) : Throat culture negative ; virulent diphtheria in nasal culture, no nasal discharge. November the 29th and 30th (fifty-ninth and sixtieth days) : Anterior nares sprayed and swabbed twice daily with broth cultures. December the 1st : Headache and vomiting. Specks on tonsils. Glands at angles enlarged. Some nasal discharge. Still some diphtheria bacilli in nose, but mainly staphylococci. Throat culture negative. Temperature 101° – 103.4° F. December the 2nd : Specks on tonsils. Temperature 97.4° – 100° . December the 3rd : Still deposit on tonsils. Throat syringed four-hourly with solution of potassium chlorate and lavender. December the 4th : Throat nearly clean. December the 5th : Throat clean. Temperature 97.6° – 100° . December the 7th and 8th : Pure culture of staphylococci in nose. Temperature 97.4° – 100° . December the 14th : Nasal culture positive. December the 16th : A few diphtheria bacilli in culture, but mainly staphylococci. December the 18th : Virulent diphtheria bacilli in nasal culture. December the 29th : Nose culture negative. December the 30th : A few bacilli in culture. January the 1st and 2nd : Cultures negative. January the 4th : Discharged. The febrile period lasted from November the 30th to December the 8th the highest temperature was 103.4° .

CASE 8.—Girl, aged 3 months. Admitted August the 19th, 1912, with nasal diphtheria and congenital syphilis. 4000 units given. October the 1st (forty-fourth day) : Nasal culture positive. October the 31st (seventy-fourth day) : Virulent diphtheria bacilli in nasal culture. Nostrils sprayed twice daily with staphylococcus culture. November the 1st : Nasal discharge increased. Fauces clean. Morning temperature 101° F., evening temperature 104° . Spraying omitted. November the 2nd : Still much nasal discharge. Fauces clean. Temperature 100° – 102° . Culture positive, but much fewer bacilli present. November the 5th to 9th : Temperature normal. November the 8th : Nasal discharge still profuse. More diphtheria bacilli in culture. November the 9th : 4000 units of antitoxin given. November the 10th : Erythema and œdema of skin of abdomen at injection site. Temperature 102° – 99° . November the 17th : Broncho-pneumonia. November the 19th : Death. Although the application of the spray was followed by a febrile reaction lasting for four days, the temperature became normal, and subsequently remained so until after the re-injection. The terminal broncho-pneumonia, to which the child was predisposed by its

chronic rhinitis, developed nearly three weeks after the use of the spray, which cannot therefore be regarded as responsible for the fatal issue. It is more reasonable to incriminate the combination of congenital syphilis, diphtheria and anaphylaxis.

CASE 9.—Girl, aged 16 years, admitted January the 27th, 1913, with mild faucial diphtheria. 12,000 units given. Throat clean on January the 30th. March the 6th (fortieth day): Fauces slightly injected, clean. Culture positive. March the 12th (forty-sixth day): Virulent diphtheria bacilli in culture. Fauces as on the 6th. Staphylococcus spray and swab applied to throat 11 a.m., 2.30 p.m., and 7.30 p.m. March the 13th: Treatment continued. March the 13th and 14th: Cultures positive. March the 15th (third and last day of treatment): Pure culture of staphylococci, no diphtheria bacilli present. A few specks on right tonsil. Temperature normal. March the 16th and 17th: Cultures negative. March the 17th: Throat clean. March the 20th: Discharged. There was no rise of temperature nor constitutional disturbance in this case, and the local reaction was minimal.

CASE 10.—Woman, aged 36 years, admitted March the 11th, 1913. She had had a sore throat a week previously, but the throat was clean on admission. No antitoxin given. March the 26th (twenty-third day): Culture positive, fauces normal. March the 28th (twenty-fifth day): Culture positive. Staphylococcus spray and swab used twice daily. March the 29th and 30th: Cultures positive. March the 30th: Second and last day of treatment. March the 31st and April the 1st: Culture negative. Fauces normal. April the 3rd: Culture negative. Discharged. There was no local nor general reaction in this case.

SUMMARY.

Ten chronic diphtheria bacillus carriers were treated by spraying and swabbing the throat or nose with a bouillon culture of *Staphylococcus pyogenes aureus*. In six faucial cases the findings became negative within two to seven days after starting the treatment. In the two nasal cases the treatment was ineffective. In all but two cases a mild form of sore throat was produced, but no complication ensued.

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MALTED FOOD IN THE TREATMENT OF ENTERITIS IN YOUNG CHILDREN.*

By SOLON VERAS, M.D.,

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Correspondant de la Société de Pédiatrie, Paris.*

DURING our nine years' pædiatric practice in Turkey the complaint for which we have been most often consulted is certainly the enteritis of infancy. It is in the summer that the disease claims most victims, since in Smyrna out of three deaths among children *per diem* (out of 7-8 deaths) at least two are due to enteritis or its complications. It is certain that the summer heat which favours intestinal putrefaction contributes to a great extent to the prevalence of this disorder, but we are forced to admit that it is chiefly the bad quality of the milk and the deplorable hygienic surroundings which are the chief causes of the disease in our country.

Now, as we have had experience of a considerable number of cases of enteritis, we believe we have tried every therapeutic method, and we have arrived at the conclusion which is shared by most of our colleagues—that the treatment of enteritis, which is an intestinal auto-intoxication—should be essentially anti-putrefactive. Can we succeed in making the intestine antiseptic by any drug? We think not, and therefore reject any so-called intestinal antiseptic, such as benzo-naphthol, betol, salacetol, etc.

The only drugs we employ are a few absorbents or astringents, such as tannigen or tannalbin, and these only in special cases. Anti-putrefactive treatment can only be obtained by an appropriate diet which will tend to change the intestinal flora.

For we hold with Combe† that the composition of the bacterial

* Abstract of a paper read before the Association Internationale de Pédiatrie, in Paris, October the 10th, 1912.

† 'Traitement de l'entérite muco-membraneuse,' Paris, 1911, p. 271.

flora of the intestine in great part depends upon the diet. Milk, containing a high proportion of nitrogenous substances, and consequently being an excellent culture medium for proteolytic bacilli, easily enters into putrefaction, and produces gases which irritate the intestinal mucosa. It is, therefore, not tolerated by children suffering from enteritis, and we have seen the intolerance extended even to woman's milk.

To arrest the development of intestinal putrefaction, the best method, as all pædiatrists agree, undoubtedly consists in putting the child on water diet. But for how long can this diet be continued? In our opinion it should not be prolonged over twenty-four hours, and only in exceptional cases have we extended it to forty-eight hours.

A preparatory *régime* is therefore needed if we wish to avoid the disadvantages caused by a too rapid return to milk diet. In many cases Comby's cereal decoction or Méry's vegetable broth may serve this purpose, but in more serious cases, especially the chronic ones, where the slightest return to milk causes a relapse, neither of the preparations can be employed except for a short time. Their nutritive value is not much superior to salted water, and they can only serve as a continuation of the water diet. It is true that vegetable broth or soup prepared with rice cream has a superior nutritive value to that of plain broth, but it is not the ideal *régime*, and we have seen several children refuse it after one or two days' trial; other preparations, therefore, must be employed. We have sometimes had excellent results with food rich in ferments, such as kephir, butter-milk or yogourth, but these foods are not accessible to all, nor, indeed, have they always proved successful in our hands. For this reason we have been led to employ malted foods.

It is well known that farinaceous articles of diet which contain a small amount of nitrogen resist putrefaction better than others. They will naturally be better tolerated and in larger quantities when they have undergone certain modifications to render them more digestible, and these modifications are best realised by the diastase of starch. Farinaceous foods, therefore, which have previously undergone malting, represent the best preparatory *régime* in the enteritis of children, and can be used for a long time without any drawbacks.

Furthermore, as milk which has been mixed with flour has not the disadvantages of pure milk owing to the anti-putrefactive action of the flour, a little milk may be added to the malt preparation, and the amount gradually increased, so that the child may be prepared for a milk diet.

The first process we adopted for the preparation of malt soup was that of Heller.* We often found this method fairly satisfactory, but it did not give us constant results nor have we been more successful with Demarque's† process. In 1905 we first made use of E. Terrien's‡ method, which has always given us the best results, as we have previously shown in a communication made at the medical congress at Athens in April, 1906.

Terrien's method is as follows :

To isolate the diastase infuse 20 gm. of crushed malt in a small quantity of water at 60° C., and maintain this temperature for half an hour. The soup is prepared thus : Stir up 80 gm. of rice flour in a litre of cold water and milk mixed in variable proportions according to the case. Heat to 100° C., allow to cool to 80° C. and add 50 gm. of ordinary sugar. After this has dissolved, the temperature being still kept at 80° C., add the infusion of malt, which has been strained through a cloth or sieve, and leave for ten minutes. Heat again to 100° C. to sterilise it.

The only objection to this method is that it cannot be carried out by everyone. A thermometer registering 100° C. is not always available, and often those looking after the children would not know how to make use of it. We have therefore endeavoured to simplify the technique as follows : A packet containing 20 gm. of freshly prepared malt is poured into a large glass containing about one and a half inches of water. The water, which has been previously boiled, must be kept at a constant temperature of 60° C., *i. e.* one which can just be borne by the little finger, and placed in another receptacle of warmer and frequently changed water. Then take three large table-spoonfuls of rice flour and mix in 600 gm. of water and 300 gm. of milk in the cold. Put the mixture on the fire and stir to prevent lumps forming. When it has begun to boil take it off the fire, and after about a minute quickly add 50 gm. of sugar, and then strain into it the malt infusion, still kept at the previous temperature. It is certain that the malting process carried out in this way does not take place at a constant temperature of 80° C. as Terrien§ states, but the temperature hardly varies from 90° to 75° C., and this is just the temperature of the diastase. It is now nearly seven years since we used this simplified method and we have always found it successful.

* 'Deut. med. Woch.,' 1898, xxiv, p. 617.

† 'Thèses de Paris,' 1903-4, No. 367.

‡ 'Compt. Rend. Soc. de Biol.,' 1905, lix, p. 396.

§ Terrien, "Précis d'alimentation des jeunes enfants," Paris, 1908.

In a case of enteritis we start with water diet, and sometimes continue with vegetable broth and then very rapidly reach the malt soup stage. But instead of at once resorting to malt soup prepared with milk, we start with malt soup prepared with pure water, employing 900 grm. to a litre of water, instead of 600 grm. of water and 300 grm. of milk. The following day we give malt soup prepared with milk, alternating each meal with malt soup without milk. Tolerance to milk becomes established and never offers any difficulty.

During the hot weather it is well to keep the soup in an ice chest, or, better, to prepare it twice a day. In our malt soup we have always employed rice flour in preference to wheat flour used by Terrien. Rice is certainly the most digestible carbohydrate and the most easily assimilated, since the very smallest quantity is found in the fæces.*

Soup such as we have described where methodically started and gradually left off constitutes in our opinion the best anti-putrefactive diet in the enteritis of children. It can hardly be given, however, until after the age of five months, and is contra-indicated in younger children, whose stomach would not always tolerate rice cream even when diastased. With children under five months, instead of rice meal we have used a decoction of rice passed through a fine cloth in which we have used the diastase according to the same technique. For a large glass (300 grm.) of rice decoction we use 15 to 20 grm. of sugar and 10 grm. of malt; milk is then gradually added to the decoction according to the tolerance of the child.

In children under five months we have also employed with success various proprietary malted preparations, but our best results have always been obtained by Terrien's method.

Royal Society of Medicine.

EPIDEMIOLOGICAL SECTION.

February the 28th, 1913.

MEASLES.

Dr. WILLIAM BUTLER, after quoting the interesting remarks of Rhazes, referred to his own investigations as to the universality of measles. One

* R. Gaultier, 'Précis de coprologie clinique,' 1907, p. 202.

hundred and seventy-eight per cent. of 14,000 persons at all ages had suffered from this disease. In the age-groups 0-4 only 8·4 per cent. had already undergone an attack of measles, while from the age of fifteen onwards 97·3 per cent. had previously suffered. Among the more favoured classes measles is a less necessary experience in the earlier years of life. At Marlborough College, of 632 boarders, 190 between the ages of thirteen and seventeen were attacked—an incidence-rate of 30 per cent. as compared with one of 2·2 per cent. in elementary scholars between the years of ten and fifteen. Four hundred and fifteen boys were noted as having suffered previously from this disease, and of these, nine had a second attack—an incidence-rate of about 2 per cent. as contrasted with an attack-rate of 0·5 per cent. in the previously infected public elementary school-children. Speaking generally measles is acquired in early childhood and confers immunity throughout life: age in itself does not confer immunity, as is evidenced by the Marlborough experience and that of various isolated communities. Nevertheless there are wide ranges in natural and acquired immunity, for of 174 infants under six months of age, only 18, or 10·2 per cent., were attacked, whereas of 209 between the ages of six and twelve months, 161, or 77 per cent., contracted the disease. Similar figures were quoted from Holt's 'Diseases of Infancy and Childhood.'

The interesting figures of Dr. Robert Watt, of Glasgow, are quoted to show that in 1813 one child out of ten attacked died from the measles, and even now the death-rate is understated, many of the cases being entered under affections of the respiratory organs. The mortality at various ages was then given; as many as 5 per cent. of all notified cases aged one year died, while at five years and upwards only 0·5 per cent. succumbed. There has been a definite age-shifting of the measles mortality on to the first two years of life, owing to the increased aggregation of the population in London, and the increased opportunity for infection entailed by school attendance. Thus in Willesden 70 per cent. were traceable to cases contracted in the infant department of these schools.

Raising the school age for elementary scholars would not materially lessen the incidence of the disease on the younger children, as the older children infected in school would go back to their homes and convey the disease to the younger members of the family. This explains why public school-children escape infection at home, except when medical officers close the schools and send the contacts to their own homes. Frequently by the closure of an infants' school upon the occasion of a first case or even of a first crop of cases the resulting cases occur during school closure, and upon re-opening no further cases are noted, but it is improbable that anything but a slight raising of the average age of disease incidence and a reduced mortality will be effected by such means. Measles would probably not be efficiently controlled until a vaccine had been discovered.

A Note on an Epidemic of Measles at Rotumá.—Mr. B. GLANVILL CORNEY (*vide* p. 252).

Provincial Societies.

MIDLAND MEDICAL SOCIETY.

November the 13th, 1912.

Henoch's Purpura; Intussusception; Resection; Recovery.—Mr. SEYMOUR BARLING showed the patient, a boy, aged 4 years, whose mother states that he has always been rather a delicate child with a poor appetite, and for the last twelve months has suffered from stomach ache and frequent sickness. Three weeks before admission the abdominal pain and sickness became more noticeable, and a rash appeared on the buttocks and then spread to the limbs; the rash at first was definitely urticarial, becoming later hæmorrhagic—as the mother describes it, “like bruises.” At this time the mother noticed a small amount of blood in the motions. The rash faded in a few days, but fresh crops came out of a similar nature, the spots being smaller, the pain lessened, and the child gradually improved. At 4.30 p.m., however, on the evening before admission he had a sudden violent attack of abdominal pain worse than he had ever experienced previously, was sick, and almost immediately dark fluid blood was passed from the bowel. These symptoms of pain, sickness and hæmorrhage continued more or less throughout the night, but abated somewhat on the morning of admission. When seen by the doctor at 10 p.m., that is, six hours after the attack had started, no lump could be felt in the abdomen.

On admission, twenty hours after the onset of pain, the child was pale and quiet, pulse 128, temperature normal, belly was soft, and an irregular trilobed tumour could be felt lying somewhat transversely in the epigastrium and apparently slightly movable on respiration. *Per rectum* nothing could be felt, but dark fluid blood escaped on removing the finger; the urine contained a quantity of albumin, but gave no reaction to guaiacum. On the knees and ankles, and on the forearms especially in the neighbourhood of the elbows, there was a papular rash, some of the papules showing old hæmorrhages.

Operation immediately after admission: A median incision above the umbilicus revealed a large dark sausage-shaped tumour, which, owing to the kinking of the transverse colon on itself, gave the trilobed appearance which had been noticed on examination. The tumour was about ten inches in length and the apex of the intussusception was in the upper part of the descending colon; the distal half reduced quite easily, leaving the proximal four inches unreduced. After some twenty minutes' manipulation, during which time the peritoneal coat of the descending colon tore, this remaining mass was reduced. In reducing this residual part of the tumour, the caput cæci, the appendix, and then some fifteen inches of the lower end of the ileum were expressed in turn. The appendix, cæcum, and the ileum that had been involved in the intussusception showed extensive interstitial hæmorrhage, and some inches of small bowel were black and apparently gangrenous. The part of the bowel above the obstructed portion was distended by dark blood-stained fluid lying in its lumen. The gangrenous portion, together with some inches on the proximal and distal sides of it, was excised, about

twelve inches in all being removed, the open ends of the bowel crushed and turned in, and the continuity of the gut established by lateral anastomosis.

The patient suffered considerably from shock and was very restless for the first forty-eight hours, but since that time has made satisfactory progress, with the exception of some suppuration in the wound.

Dr. PARSONS remarked that Mr. Seymour Barling's case was the only one in the literature of Henoch's purpura which had recovered after an operation for intussusception involving resection of the bowel. A few cases of intussusception complicating Henoch's purpura were on record, but there were many more cases which had been operated on for intussusception in which none was present. He pointed out that in nearly all cases of Henoch's purpura there were signs of kidney trouble, *e. g.* albumin, and blood, in the stools, which proved a great help in diagnosis.

Mr. NUTHALL had seen a case of acute arthritis of the ankle with hæmorrhages in the skin, abdominal pain, and vomiting, with albuminuria, casts, and hæmaturia, which died. Unfortunately there had been no post mortem.

Mr. SEYMOUR BARLING, in reply, said that in these cases where a lump was palpable in the abdomen (if necessary examining under an anæsthetic), it was justifiable to explore the abdomen to see if there was any intussusception. Operation was not particularly dangerous except for the possibility of hæmorrhage into the wound and the return of the purpura. He had no suggestion to make as to the ætiology of the disease.

November the 27th, 1912.

Tuberculous Laryngitis.—Dr. PARSONS showed a specimen of a tubercular larynx in an infant. There was also marked pulmonary tuberculosis. He also demonstrated microscopical sections of the spinal cord and muscles from a case of progressive muscular atrophy (Hoffman-Werdnig type).

BRITISH MEDICAL ASSOCIATION: BIRMINGHAM BRANCH.

November the 14th, 1912.

Splenic Anæmia in an Infant.—Dr. EMANUEL showed a boy, aged 2 years and 3 months, suffering from splenic anæmia. The child was the fifth of the family, but only one other was alive, the other three having died in infancy. The mother had had no miscarriage. The child had been bottle-fed, and had suffered from gastro-enteritis. The head was rather square, which suggested a syphilitic or rachitic origin. About a year and three months ago the abdomen was noticed to be prominent, and on examination it was found that there was a very large spleen, reaching below the umbilicus and a little to the right of the middle line. The blood-count showed that the red cells were 2,800,000 and the white 12,000 per c.mm. The hæmoglobin was 40 per cent. There was a preponderance of lymphocytes, and a few normoblasts and megaloblasts were present. At this time it was suggested that the spleen should be removed. However, this was not done, and under

treatment the child's condition had gradually improved, so that at the present time the spleen had reached almost its normal size.

Dr. SAWYER said that this case showed an important point, and that was that it was unwise to remove the spleen in an infant, because the condition was very different from the splenic anæmia which occurred in adults. The spleen was nearly always found to be enlarged in young children who suffered from anæmia for any length of time, and with appropriate treatment the spleen diminished in size as the anæmic condition improved. He considered that the anæmia and the enlargement of the spleen were probably produced by a toxin manufactured in the intestinal tract, and that the anæmia was not secondary to the hyperplasia of the spleen.

Dr. NASON agreed with Dr. Sawyer that the causation of the condition was an alimentary toxæmia.

Mr. R. J. WARD said that he had been asked to see the patient with a view to the removal of the spleen, but on account of the unsatisfactory condition of the child at the time the operation was postponed. He was very pleased to find that the improvement had been such that no operation was called for, and he did not think that so severe a procedure was likely to be successful in patients of such tender years.

Dr. EMANUEL, in reply, said that the disease in infants was not similar to the splenic anæmia of adults, in whom removal of the spleen was the best chance of recovery. There was, however, a similar condition which was found only occasionally in young children, and in such cases it was necessary for the removal of the spleen to be performed. In most of the cases of secondary anæmia in children when the spleen was enlarged the patient got well without this operation.

Cardiolysis for the Relief of Adherent Pericardium.—Sir ROBERT SIMON read a paper on this subject, and said that until ten years ago cardiolysis had not been attempted, but since that time nineteen cases had been recorded with favourable results, at any rate for a time. The relief was considered to be due to the removal of the restriction caused by adhesions between the pericardium and the chest-wall. He described the case of a boy on whom Mr. Gilbert Barling had performed this operation. The patient was an office boy aged 15 years. At the age of twelve he had had pleurisy on the left side. He had never had an attack of rheumatic fever, but had suffered from "growing pains." After the attack of pleurisy his cardiac symptoms developed, the most noticeable thing being a gradually and progressively increasing dyspnœa. When seen in February, 1912, the legs were œdematous, and there was a considerable amount of ascites. There was marked dyspnœa and cyanosis. The cardiac apex was in the left axillary line, the præcordia was prominent, and there was systolic reaction. There were loud murmurs in the mitral area, and also systolic and diastolic bruits over the aortic and pulmonary areas. The liver reached to within a finger's breadth of the umbilicus. Fluid was removed from the pleura and also the abdomen by aspiration. The pulse was very feeble and the rate was about 112. It was decided to perform cardiolysis, and the operation was done by Mr. Gilbert Barling, who removed the costal cartilages and portions of the sixth, seventh and eighth ribs for about four inches from the sternal margin. The anæsthetic given was a mixture of N_2O and oxygen after an injection of atropine and morphia. The patient became very bad during the operation, and artificial respiration was performed. Recovery from the anæsthetic was remarkably quick, and the patient seemed to be better almost immediately.

Four days after the operation the patient was more comfortable than he had been for months, the pulse-rate fell to 60, and the dyspnoea diminished. In July he was walking with no œdema and no ascites. There was, however, myocardial degeneration in this patient, for the pulse-tracings showed that he was suffering from auricular fibrillation.

The diagnosis of adherent pericardium was frequently very difficult, and additional evidence of its presence in any case could be obtained by an X-ray examination of the thorax. When the pericardium was normal the movements of the diaphragm were well marked, the shadow rising with expiration and falling with inspiration, having an incursion of two to three inches, but when there were adhesions between the layers of the pericardium then the movements of the diaphragm during respiration were greatly restricted. The amount of the movements of the diaphragm could be gauged by watching the movements of the abdominal wall, for during ordinary inspiration the epigastrium came forward, whereas if the movements of the diaphragm were only slight this protrusion could hardly be noticed. Absence of these movements in the epigastrium indicated the presence of adherent pericardium. The fibrous pericardium was normally adherent to the diaphragm over a much larger area than was generally supposed. When an adherent pericardium was present this area was greatly increased, and the heart was more firmly anchored to the diaphragm. The pericardial adhesions to the diaphragm may also constrict the inferior vena cava and thereby impede the passage of blood into the right auricle. It was suggested that in addition to the ordinary operation of cardiolysis an attempt might be made to free the adhesions around the inferior vena cava.

Sir ROBERT SIMON demonstrated in a dissected specimen the relation of the fibrous and serous layers of the pericardium with the superior and inferior vena cava and the diaphragm. Some interesting anatomical points were discussed.

Dr. NASON said that the paper was of extreme interest, but he could not help feeling that surgery was invading the realm of medicine even more and more. He thought that cardiolysis must help the heart by relieving it of the resistance and weight of the chest-wall.

Mr. GILBERT BARLING said that it was difficult to decide upon the anæsthetic, for local anæsthesia was almost impossible, as there was sure to be considerable pain in stripping the pleura off the chest-wall. N_2O and oxygen were administered, and there was really no difficulty with this anæsthetic. He removed the periosteum with the rib in order that there should be no new bone formation. The pleura was perforated two or three times, but no attempt was made to close the openings. The operation took about twenty-four minutes. The boy recovered very rapidly from the anæsthetic, and in five minutes seemed quite well. This improvement was evidently due to the mechanical relief. Mr. Barling considered that a certain amount of advantage was gained by this operation, but it was probably only temporary. The operation would probably be of much more use if it could be done earlier in the disease before the cardiac compensation was so completely broken down.

Mr. LEEDHAM-GREEN thought he had seen the first patient on whom the operation of cardiolysis had been performed, as he remembered seeing a case in Berlin in 1903. He had seen several since who had done very well, but he was sure that there were many other cases which had not been reported where no advantage had been gained by the operation. The favourable result depended upon the condition of the heart muscle, for if

there was severe myocardial degeneration then it was very little use attempting cardiolysis. He considered that it was not essential to remove the periosteum, for when such a large portion of the ribs was excised there was no appreciable bone regeneration.

Sir ROBERT SIMON agreed that cardiolysis should be performed preferably in those cases when there was no myocardial degeneration, and also before compensation was greatly damaged. He pointed out how very difficult it was to persuade the parents to allow their children to undergo such a serious operation in the earlier stages of the disease when the children were in comparative comfort.

PATHOLOGICAL AND CLINICAL SECTION.

November the 29th, 1912.

Juvenile Tabes.—Dr. K. D. WILKINSON showed this case in the unavoidable absence of Dr. STANLEY BARNES. The patient was a woman, aged 25 years, suffering from tabes, the symptoms commencing at the age of fifteen years. She was totally blind in the right eye, and partially blind in the left. The fundus showed optic and choroidal atrophy. The knee-jerks and ankle-jerks were absent, and there were lightning pains, anæsthesia, ataxia, and loss of muscular pain-sense. The teeth were possibly Hutchinsonian, but were so worn that the bevelling did not show. She had interstitial keratitis. The father and mother both died of tabes, and the patient was one of a family of thirteen, three of whom are alive. There are two brothers healthy and well, and the remainder died in infancy.

Mr. HEATON did not consider that the condition of the teeth were typically that described by Hutchinson, although there was other evidence of congenital syphilis. He described a case in a girl which was diagnosed as gastric ulcer, but which was afterwards found to be one of gastric crises occurring in juvenile tabes.

Dr. DOUGLAS STANLEY also agreed that the teeth did not show the characteristic appearance found in congenital syphilis, and described a case of juvenile tabes whose father had died of tabes.

Dr. SAWYER said that he had had under his care two sisters who suffered from tabes, and that in each case the disease had made itself manifest before the age of twenty years. He considered that they were instances of juvenile tabes.

Dr. MELSON asked what was the usual age at which the first symptoms of juvenile tabes commenced, and whether there were any difference in the prognosis in this condition and the tabes which occurred later in life.

Dr. WILKINSON replied that juvenile tabes commenced soon after puberty, and that he thought that the prognosis was the same at whatever age the disease commenced. He mentioned another case of juvenile tabes who had been under the care of Dr. Thomas Wilson in the General Hospital, and whose father and mother had died of tabes.

A Case for Diagnosis.—Dr. DOUGLAS STANLEY showed a little girl, aged 12 years, with the following history. On October the 5th, 1912, she suddenly developed a headache and her vision became dim, and on the following day she was quite blind. She was then admitted into the Queen's Hospital.

She had had three attacks of acute rheumatism, and was found to be suffering from an old-standing mitral disease. The pupils were dilated, and on examining the optic discs the veins were found to be thrombosed, and equally so in the two eyes. There was no paralysis, and the temperature was normal. On October the 13th the temperature rose to 103° F., and there were bronchitic signs in the lungs. A few days later a large patch of consolidation occurred at the base of the left lung. The knee-jerks were then exaggerated, and the plantar reflex flexor. A few days after this paraplegia developed, the knee-jerks disappeared, the plantar reflex became extensor, and there was incontinence of urine. The eyesight then gradually improved, so that now the patient could see fairly clearly. The condition of the discs was one of optic atrophy, and there was slight lateral nystagmus. The paraplegia had also improved, so that the patient could now walk a little. Sensation was impaired in the legs, and there was a band of hyperæsthesia just above Poupart's ligament.

Dr. WYNN suggested that the disease was one of disseminated sclerosis, and that there had been an infective process in the lungs, which precipitated the nervous condition.

Dr. SAWYER asked for more information with regard to the onset of the blindness. He wondered whether the onset was quite so sudden as the history indicated, for it was difficult to imagine that a thrombosis could occur simultaneously in each eye. If it were really a thrombotic process, then it would be more reasonable to suppose that the thrombosis had commenced in the cavernous sinus, and not in the retinal vessels. This would probably produce proptosis, and he asked if any prominence of the eyes had been noticed. As the eyes now showed optic atrophy, was it not possible that the previous eye condition was one of acute optic neuritis?

Dr. DOUGLAS STANLEY said that the condition of the patient had not suggested to him the diagnosis of disseminated sclerosis. The onset of the blindness was absolutely sudden, and the eyes were affected simultaneously. The veins appeared absolutely blocked, and Dr. Allport had confessed his view that the condition was one of thrombosis of the veins, and had explained the optic atrophy as due to the pressure that had been exerted upon the nerves. He considered that the symptoms were due to an infective process which had produced thrombosis in various places, starting in the retinal vessels and also involving some of the vessels in the lumbar enlargement of the spinal cord. What the infection was he could not suggest, but he did not consider it was of rheumatic origin. He had treated the patient with large doses of citrate of soda.

Société de Pédiatrie, Paris.

March the 11th, 1913. (Bulletin No. 3.)

Over-sweetened Milk in Infantile Dyspepsia. — MM. VARIOT, LAVIALLE and ROUSSELOT communicated further researches on this subject. They considered the anti-emetic properties of condensed milk due to the excess of sugar. They found that the stools, with milk hypersaccharated and sterilised at 108° for three quarters of an hour, were sometimes more liquid and frequent than with condensed milk; hypersaccharation of milk in

the cold produced still more marked laxative results. It seemed that scalding milk in the presence of sugar had similar effects to evaporation *in vacuo* for two days.

Friedreich's Disease.—MM. BABONNEIX and ROEDERER showed a youth, aged 17 years, in whom the disease first showed itself as a plantar malformation. Juvenile tabes was negatived by the persistence of the kneejerks and the absence of Romberg's and ocular signs.

Scoliosis from Malformation of the fifth Lumbar Vertebra.—Mme. NAGEOTTE-WILBOUCHEWITCH reported a case, and discussed the treatment by means of a high boot.

Congenital Absence of Iris and Double Cataract in an Infant of 3 Months.—MM. A. CANTONNET and G. SCHREIBER showed this infant, who was subject to nystagmiform attacks, and whose pupils were widely dilated. The iris was almost completely absent, and there was anterior polar and zonal cataract. The ætiology was obscure—there was no hereditary cause nor syphilis. Treatment could only be palliative.

Incomplete Stenosis of Pylorus.—M. DUFOUR showed an infant, aged 6 months, who at the age of three weeks began to vomit and waste. Cure was effected by giving small and frequent feeds every hour.

The Frequency of Abscess in Pott's Disease.—MM. ROEDERER and WEILL showed a number of radiographs illustrating this condition. Two facts were drawn attention to. Latent dorsal abscesses are easily detected by radioscopy, while lumbar abscesses, which are so common, even when perceptible to palpation do not give any shadow, especially if caseous. The occurrence of a dorsal abscess necessitates a long period of close watching even after apparent cure, for radioscopy cannot differentiate between abscesses in process of formation, those fully developed and those which have undergone cicatrisation.

Congenital Hypertrophy of Pylorus operated on at the age of 2 Months.—MM. GRENET, SEDILLOT and VEAU reported this case, which was of interest, owing to the cause of death being a ventral hernia. The speakers recommended suturing the abdominal walls in one layer with silver wire left in from fifteen to twenty days.

Congenital Scoliosis.—M. LANCE related a number of cases showing the causation of this condition to be due to supernumerary hemi-vertebra and rib, atrophy of half the body of the ninth dorsal vertebra and absence of half the fourth dorsal vertebra and corresponding rib.

The Radiology of Infantile Pneumonia.—MM. WEILL and MOURIQUAND gave the results of fifty-two cases. Out of thirty-three cases of true pneumonia thirty-one gave positive radioscopic signs. In two of these cases there were no stethoscopic signs. In thirteen cases stethoscopic signs appeared late, while radioscopy showed the presence of a shadow on the first examination. In eighteen cases only did the radioscopic and stethoscopic signs exactly correspond. In a following communication the speakers maintained that central pneumonia did not exist, and that radioscopy would reveal a triangular peripheral focus of hepatisation in the absence of all stethoscopic signs. Broncho-pneumonia gave no shadow.

VINCENT DICKINSON.

NATIONAL ASSOCIATION FOR THE PREVENTION OF INFANT MORTALITY AND FOR THE WELFARE OF INFANCY.

ARRANGEMENTS are now well in hand for the English-speaking Conference on Infant Mortality, to be held at Caxton Hall, Westminster, on August 4th and 5th. It is under the immediate patronage of the King and Queen, and will be presided over by Mr. John Burns. Lady Aberdeen, Mr. Pease, Sir George Newman and Dr. Arthur Newsholme are among the Chairmen of the various sessions into which the two sections—administrative and medical—are divided. Papers will be read by experts from the United Kingdom, the United States and the Colonies on many aspects of the following questions: The responsibility of central and local authorities in the matter of infant and child hygiene; the necessity for special education in infant hygiene; medical milk problems; the administrative control of the milk supply; and ante-natal hygiene. The United States and a large number of Colonial Governments will be officially represented and the attendance generally promises to be very large. The British railways and steamship companies with services to the colonies and to the States have all granted special travelling facilities, particulars of which are set forth in the detailed programme, which may now be obtained from the Secretary of the National Association for the Prevention of Infant Mortality, at 4, Tavistock Square, London, W.C.

Abstracts from Current Literature.

Medicine.

Methods of estimating kidney function (*Amer. Journ. Dis. Child.*, 1913, v, p. 25).—**R. M. Smith** discusses the various methods of estimating the function of the kidneys, and calls particular attention to the test afforded by the subcutaneous injection of phenolsulphone-phthalein. In infants and children he has used 3 mgrm. in a 1 c.c. solution, and finds that, as in adults, the drug appears in the urine in about ten minutes. The percentage of the dose excreted within an hour is easily calculated by colorimetric tests. He finds that in nephritis the appearance of the drug in the urine may be retarded and the percentage excreted within an hour is diminished, and regards this as valuable in showing the ability of the damaged kidneys to eliminate toxins and in estimating the danger of uræmia. The test does not assist in determining the ability of the kidney to eliminate proteins, salt and water.

REGINALD MILLER.

Urea in the cerebro-spinal fluid of infants (*Arch. de M'ed. des Enf.*, 1912, xv, p. 826).—**Nobécourt, Sevestre** and **Bidot** carried out researches in fourteen infants of less than a year old regarding the quantity of urea in a pint of cerebro-spinal fluid. The amount was normal (0.15 gr. to 0.40 gr.) in cerebro-spinal meningitis, tuberculous meningitis, and in infective disease with meningeal reaction. In affection of the kidneys the amount of urea was raised to 0.42 gr. and 0.43 gr. In gastro-intestinal affections it was markedly elevated in amount (1 gramme to 1.50 gr.).

F. E. B. ATKINSON.

Comparative amount of urea in the blood, cerebro-spinal fluid and urine in sucklings affected with gastro-intestinal troubles (*L'Echo Méd. du Nord*, 1913, xvii, p. 1).—**Benoit, Deléarde and Hallez** find that a larger amount of urea than 1 gramme per litre is generally followed by death in a short time, and that a relatively small amount of urea, though not always suggestive of a favourable prognosis, is frequently so. They found that in dyspeptic infants fed on cow's milk the amount of urea in twenty-four hours reached on an average 3.270 gr. instead of 1.870 gr. as maintained by Pignierol. Their observations are based on the examination of sixteen cases.

F. R. B. ATKINSON.

Somnolent form of azotæmia resembling tubercular meningitis (*Ann. de Méd. et Chir. Inf.*, 1912, xvi, p. 712).—**Nobécourt and Maillet** record two cases of this condition, which is diagnosed by estimation of the amount of urea in the cerebro-spinal fluid. The first case was an infant, aged 2 months, who wasted, had bad stools and some signs of broncho-pneumonia. After some days Kernig's sign appeared, with rigidity of the neck, squint and a flexed condition of all the limbs. The temperature was normal. The cerebro-spinal fluid contained 1.70 to 2.30 grammes of urea in the litre. This child died. The second child, aged 3 months, breast-fed, became very drowsy and wasted. There was slight diarrhœa. The cerebro-spinal fluid contained 0.80 gr. per litre. After lumbar puncture the child rapidly improved. The chief signs of this condition are sleepiness and wasting, and occasionally squint, rigidity, etc. The pupils are usually contracted, and there may be Cheyne-Stokes' breathing. The pulse, though it may be more frequent, is always regular.

J. PORTER PARKINSON.

Urobilinuria and urobilinogenuria in breast-fed children (*Jahrb. f. Kinderheilk.*, 1912, lxxvi, p. 645).—**S. Ostrowski** finds in healthy sucklings the reaction to both these substances is negative. On occasions these reactions in the urine are also negative in children obviously ill. There is no connection between the inferiority of the reaction and the extent of the morbid process. If they are positive a pathological condition, most probably hepatic insufficiency, is present.

F. R. B. ATKINSON.

The clinical application of the acetone reaction in children (*Jahrb. f. Kinderheilk.*, 1913, lxxvii, p. 125).—**G. von Ritter** comes to the following conclusions: (1) The acetone reaction is a valuable diagnostic means in all uncertain febrile or afebrile diseases of children which are to be referred to gastro-intestinal intoxication. (2) It is most valuable between the second and third years of life. (3) If the reaction exists longer than seven days the diagnosis and prognosis should be guarded. (4) In the pure cases of gastro-enterogenous acetonuria the reaction is a guide to treatment, especially as regards diet.

F. R. B. ATKINSON.

Congenital stricture of the ureter producing pyonephrosis; nephrectomy (*Med. Record*, 1912, ii, p. 895).—**L. Miller Kahn**.—A boy, aged $4\frac{1}{2}$ years, was admitted to hospital with symptoms of intestinal obstruction and a large mass occupying the greater part of the left side of the abdomen. Laparotomy was at once performed. The pelvis of the left kidney was opened and about a quart of fluid evacuated. Some six weeks later the left kidney was removed, and a stricture was found in the left ureter one inch below the junction of the pelvis with the kidney. When

seen one year after the operation the boy was in good health. Only 58 cases have previously been recorded of congenital stricture of the ureter producing pyonephrosis (*v. Bottomley, 'Ann. Surg.,' 1910, LII, p. 597*).

J. D. ROLLESTON.

Congenital hydronephrosis with aplasia of the ureter (*'Arch. of Ped.,' 1912, XXIX, p. 764*).—**F. van der Bogert** records a case in a boy, 4½ months old, whose family history suggested a diagnosis of congenital syphilis. The symptoms were persistent vomiting, frequent micturition, and distress when laid on the left side. Death occurred suddenly. The necropsy showed a markedly distended bladder, a normal right kidney and ureter, with compensatory hypertrophy of the kidney, hydronephrosis of the left kidney, and a ureter on that side ending almost abruptly 2 in. below the renal pelvis.

J. D. ROLLESTON.

Cystic kidneys in an infant (*'Austral. Med. Gaz.,' 1912, XXXII, p. 353*).—**W. A. Fraser**.—Post-mortem examination of a case, aged 1 year, 2 months, revealed, besides other morbid conditions, a left kidney consisting of one large sac, and a right one containing gelatinous material in a single sac.

F. R. B. ATKINSON.

Nephritis following impetigo (*'Osp. d. Bamb. d. Milan.,' 1912, I, p. 105*).—**L. Pollini**.—Post-impetiginous nephritis does not differ from other varieties of toxi-infective nephritis. It is usually of brief duration and rarely assumes a subacute or chronic course. Pollini records three fatal cases in children aged 4 years, 18 months, and 6 years respectively, in which the nephritis, as shown by histological examination, was acute parenchymatous in the first case, subacute in the second, and chronic interstitial in the third. The lesions are caused by the irritation of the pyogenic organisms and their toxins passing through the kidneys. Unlike scarlatinal nephritis, the glomeruli are least affected.

J. D. ROLLESTON.

Nephritis cured by tonsillectomy (*'Journ. Amer. Med. Assoc.,' 1913, LX, p. 742*).—**T. G. Orr** reports the case of a boy, aged 3 years, whose abdomen had been swelling for two months. When seen there was general anasarca, with fluid in the pleural and peritoneal cavities. The tonsils and adenoids were hypertrophied, and the urine contained a heavy cloud of albumin and many hyaline and granular casts. The œdema increased and the right pleura and peritoneum had to be tapped, but for five and a half months the serous cavities were never free from fluid. With treatment the œdema became less, but soon reappeared, and all attempts to eliminate the source of infection by colon and nasal irrigation and extracting decayed teeth were unsuccessful. During the entire time the urine was never free from albumin. Cultures from the nose and throat grew the *Staphylococcus pyogenes aureus*, and an abscess in the left tonsil was evacuated. Subsequently the tonsils and adenoids were removed, the latter being very large and showing suppurative infection. A rapid improvement in the child's condition immediately occurred, and by the end of twelve days the œdema had entirely disappeared and the urine contained only a faint trace of albumin. Three and a half months after the operation the patient reported himself. There was no œdema and no albumin was present in the urine. Only a rare hyaline cast could be found. The author also reports the case of a nurse

whose throat harboured bacilli a month after an attack of diphtheria. The tonsils were removed and all subsequent cultures proved negative.

T. R. WHIPHAM.

Chronic renal diseases in childhood (*Jahrb. f. Kinderheilk.*, 1913, LXXVII, p. 1).—**O. Heubner**.—Out of 17,000 children admitted to hospital in the course of seventeen years, 73, whose ages varied from 0 to 14 years, had some form of chronic renal disease; 37 were boys, 36 girls. Forty-eight, *i. e.* two thirds of the cases, occurred between the seventh and thirteenth year. Severe forms were one and a half times as frequent in boys as in girls, but renal disease secondary to pyelitis was found exclusively in girls. (1) 30 cases, 17 boys and 13 girls, were examples of "chronic hæmorrhagic nephrosis," a condition practically only met with in childhood. It differs from the chronic hæmorrhagic nephritis described by Wagner, in which hæmaturia is only a periodic phenomenon, by the constant presence of blood of greater or less amount. The quantity of urine is usually below normal. The albumin content is usually high. The sediment shows blood-cells and all kinds of casts. This form is further characterised by presence of dropsical swellings. The heart may or may not be affected. The blood-pressure is usually normal. Post mortem a combination of interstitial and parenchymatous processes is found. The disease may last for years or be fatal within six months. Ten cases were subjects of the exudative diathesis, 9 had had some specific infection. (2) This group, comprising 10 boys and 6 girls, differed only from the first in the absence of hæmaturia. The pathological anatomy was that of large white kidney. The blood-pressure in most cases was normal; only in a few was it raised. In some cases there was a history of infectious diseases, but in many no ætiological factor could be discovered. (3) Contracted kidney. Only 1 case of this occurred—in an idiot, aged 3 years, whose father had plumbism. (4) Chronic renal disease secondary to pyelitis. Six cases in girls only, chiefly in early childhood. *B. coli* was usually present; streptococci were found in 1 case. (5) Thirteen cases of mild nephritis, 9 of whom were girls and 4 boys. All but one child, aged three years, were above six years, and seven were between ten and twelve. Dropsy is never present. The albuminuria is almost always slight. The sediment shows hyaline and granular casts, leucocytes and sometimes red cells. Hæmaturia occasionally occurs, and is almost always associated with mild infections of other organs, especially the tonsils. The blood-pressure was always normal. The albuminuria may last for years, but Heubner has never known either form to be converted into any of the severe ones described above. Infections play an important part in the ætiology, especially scarlet fever. Treatment is ineffectual, and apart from avoiding chills and irritating articles of diet no special measures need be taken. (6) Intermittent albuminuria. Only 4 cases were met with. The ætiology and treatment are the same as in (5).

J. D. ROLLESTON.

Hæmoglobinuria in a child; injection of diphtheria antitoxin; recovery (*Paris Méd.*, 1912-13, I, p. 246).—**R. Marie** and **H. Rouèche**.—A boy, aged 6 years, suffering from pulmonary tuberculosis, but without any sign of inherited syphilis developed hæmoglobinuria about three weeks after the onset of acute nephritis. As other treatment proved ineffective diphtheria antitoxin was given as recommended by Lesage and Galliot (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1912, IX, p. 180). After three

injections the urine became quite clear in three days and free from albumin in three weeks.

J. D. ROLLESTON.

Paroxysmal hæmoglobinuria (*'Amer. Journ. Dis. Child.,'* 1912, iv, p. 311).—**L. C. Ager** reports a case in a girl, aged 3½ years, in whom the first attack occurred in the second year of life, and believes this to be the youngest reported case. Wassermann's test was positive in the mother and child, negative in the father. Of 36 cases of paroxysmal hæmoglobinuria, including the present, collected by Ager, 17 had congenital syphilis, 15 acquired syphilis, 2 gave a positive Wassermann's reaction, and in 2 the question of syphilis was not determined.

J. D. ROLLESTON.

Renal calculus in childhood (*'Brit. Med. Journ.,'* 1913, i, p. 112).—**R. Ollerenshaw** reports two cases in children aged respectively 3 and 8 years, in which nephro-lithotomy was successful. He thinks such cases are much more common during childhood than is generally supposed. In cases of abdominal, spinal, hip-joint or lumbar pain, where the signs and symptoms are not clear, the urine should be carefully tested and a microscopic examination made. The kidney area should be closely examined and a skiagram taken of the whole urinary tract. If possible a cystoscopic examination should also be made. In the absence of sepsis prognosis is excellent. Post-operative shock is the only real danger.

J. ALLAN.

Ruptured sarcoma of the right kidney simulating appendicular abscess (*'Practitioner,'* 1912, LXXXIX, p. 722).—**G. C. F. Robinson** describes this remarkable case, only discovered on operation, which consisted of removal of the growth and ended successfully. The rupture was caused by a fall.

F. R. B. ATKINSON.

Sarcoma of the kidney (*'La Med. de los Niños,'* 1913, xiv, p. 34).—**Moncorvo**, of Rio de Janeiro, describes a case of sarcoma of the right kidney in a child of fifteen months which was removed by operation; the child died twenty-one hours later. The tumour weighed 3 kilos. 430 grms.; its macroscopic and microscopic examination confirmed the diagnosis.

M. D. EDER.

Perirenal hæmatoma following scarlet fever (*'Deutsch. med. Woch.,'* 1913, xxxix, p. 24).—**W. Hering**.—A boy, aged 7 years, three weeks after the onset of scarlet fever developed pain in the umbilical region and a painful swelling of the left testis, followed by symptoms of peritonitis. Incarceration of the omentum in a congenital hernia was diagnosed and laparotomy performed. A sero-fibrinous exudation was found in the peritoneal cavity. There was no internal hernia nor strangulation of the bowel, and the appendix was normal, but the posterior parietal peritoneum in the region of the left kidney was projecting forward and extensive retro-peritoneal hæmorrhage was found in this region. The urine contained no blood nor albumin. Death took place on the third day after operation. The necropsy showed that the kidneys were normal, and the source of the hæmorrhage could not be ascertained. It was an open question whether it had originated in the suprarenal as sometimes occurs in acute infections, or was a localisation of capillary hæmorrhages in the retro-peritoneal tissues in consequence of a post-scarlatinal hæmorrhagic diathesis.

J. D. ROLLESTON.

Incontinence of urine in children (*Edinb. Med. Journ.*, 1913, 1, p. 49).—**J. W. Simpson** points out that when a case of enuresis presents itself the first thing to be done is by examination to classify the case either as one of simple incontinence—that is, one without any definite pathological cause—or an incontinence of a graver character due to some well-marked pathological condition. After discussing various ætiological factors he deals with the treatment of simple incontinence. Regarding drug treatment he lays stress on the fact that the cases ought to be grouped according to the composition of the urine, and four such groups are differentiated: (1) In some cases the urine presents no abnormal features. This “normal” condition is often seen in a case of incontinence following some debilitating illness, which has reduced the strength of the patient. For these cases belladonna in fairly large doses is advised. (2) The urine is found extremely acid, loaded with urates, of high specific gravity, and often diminished in quantity. Here one should try to reduce the acidity of the urine by giving citrate of potash in doses of 10 gr. thrice daily. (3) The urine is found to be neutral or alkaline, usually of low specific gravity, often containing triple phosphates, sometimes also a few pus-cells with a trace of albumin, frequently much increased in quantity. For such acid sodium phosphate may be prescribed. (4) Urine may contain bacilli. In these cases urotropine (5 to 10 gr. thrice daily) is often useful. If there is mixed infection salol is often more efficacious. Vaccine therapy may also occasionally be advantageous. In the author’s experience thyroid treatment has been disappointing, but he thinks it ought always to be tried in those cases in which the child is markedly backward mentally. Various general, dietetic and hygienic measures are discussed.

J. ALLAN.

Pseudo-lumbar puncture in enuresis (*La Pediatria*, 1912, xx, p. 754).—**G. B. Allaria** gives notes of twenty-three cases in support of his contention that pseudo-epidural puncture, carried out subcutaneously in such a way as only to wound the nerve-roots of the cauda equina and not to irritate the spinal centres, gives, in cases of essential enuresis, curative results comparable to those of true epidural puncture.

VINCENT DICKINSON.

Diabetes insipidus in tuberculous children (*Gazz. internaz. d. med. chir., etc.*, 1913, p. 153).—**G. di Giorgio** records two cases of diabetes insipidus in boys, aged 3 and $4\frac{1}{2}$ years respectively, both subjects of pulmonary tuberculosis. In the former the polydipsia and polyuria had been first noticed at the age of 28 months, and became more marked after an attack of measles four months later. The mother, aged 21 years, had also had diabetes insipidus since she was 16. The other patient had a family history of tuberculosis, but not of diabetes. The fate of the children is not recorded.

J. D. ROLLESTON.

Precocious menstruation (*Inaugural-Dissertation, Berlin*, 1912).—**Marie Maciejewska** has collected nineteen cases of regular menstruation in children aged from four months to six years, and distinguishes three classes: (1) Cases in which tumours are found in the ovaries or tubes at operation or post mortem; (2) cases with an abnormal skeletal development, e. g. rickets or osteo-malacia; (3) cases with excessive bodily development.

J. D. ROLLESTON.

Precocious menstruation with milk in breasts of infants of two generations (*Journ. Amer. Med. Assoc.*, 1912, LIX, p. 539).—**J. L. Valley** reports a family of three girls showing both the above phenomena, and one boy showing the latter only. The father of the family was one of a family of seven girls and four boys, all of whom were affected when newly born.

REGINALD MILLER.

Sarcoma of the vagina (*Journ. Amer. Med. Assoc.*, 1912, LIX, p. 509).—**P. B. Bland** reports two cases of this disease, making 106 altogether in the literature. It may be of two varieties, the grape-like or sarcoma botryoides, and the more or less circumscribed form. The former occurs very early in life; of the thirty-five cases recorded, twenty-nine occurred before the third year and all before the fifth year. Eight cases of the circumscribed form developed in children from eight to thirty-one months old. The botryoid variety is exceedingly fatal: only one case was free from a recurrence after free extirpation after three years.

F. R. B. ATKINSON.

Diatheses in children (*Arch. de méd. des enf.*, 1912, xv, p. 433).—**G. Schreiber** considers the lymphatic and arthritic diatheses in children. *Lymphatic*.—The children have a bad family history: their colour is pale, and the belly enlarged, the glands are enlarged, and tuberculosis readily occurs. The child is also a ready prey to all forms of microbes. Coryza and anginas are frequent. Blepharitis, bronchitis, vulvo-vaginitis are not uncommon. Hypertrophy of the thymus is often present, and many authors give the name of status thymico-lymphaticus to this diathesis. *Arthritic*.—Troubles of nutrition and digestion, constipation, eczema, impetigo, are often present. The face is frequently florid, but an anæmic appearance is not uncommon. In later childhood two types present themselves—a fat and a thin. According to Comby, the following are the manifestations of the arthritic diathesis. Irregularity of the pulse, bradycardia, arrhythmia, tachycardia, inorganic murmurs, syncope, coryza, fever, laryngismus stridulus, bronchitis, asthma, pleurisy, pulmonary congestion, anorexia, boulimia, colic, dyspepsia, muco-membranous enteritis, albuminuria, polyuria, nocturnal enuresis, cystitis, insomnia, convulsions, nightmares, megrim, chorea, hysteria, lumbago, torticollis, erythemata, acro-asphyxia, acne, seborrhœa, urticaria, adenoids, enlarged tonsils, etc. Some authors comprise under the name of the exudative diathesis all the symptoms previously described as belonging to the arthritic form.

F. R. B. ATKINSON.

Tetany and the parathyroids (*Osp. d. Bamb. d. Milan.*, 1912, I, p. 101).—**L. Pollini** alludes to his recent paper (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1911, VIII, p. 515), and records two other fatal cases of tetany in girls, aged 10 to 15 months respectively, in which the histological findings in the parathyroids were negative. That too great importance has been attached to parathyroid hæmorrhage in the production of hæmorrhage has been proved by the negative results of Jovane's experiments on dogs (*ibid.*, p. 516). Impaired function of the parathyroid is, however, possible in the absence of an anatomical substratum, for the normal structure of a gland of internal secretion is not a gauge of its functional integrity.

J. D. ROLLESTON.

Pituitary syndromes in children (*'Thèses de Paris,'* 1912-13, No. 70).—**G. Gaillard** describes three varieties: (1) Acromegaly, which, as a rule, is incomplete. It may be congenital, or appear at any age between one and four-teen years. It is sometimes hereditary or familial, and in two cases has been associated with heredo-syphilis. Glycosuria, which is an important symptom in the adult, has never been found in the child. (2) Adiposo-genital syndromes: This is characterised by the co-existence of generalised or local obesity with functional or organic disturbance of the generative system. (3) The syndrome of cerebral tumour without acromegaly, but sometimes accompanied by special symptoms, such as polyuria. An examination of recorded cases shows that acromegaly is associated not so much with isolated lesions of the hypophysis as with organic or functional changes in the glands of internal secretion, so that in the child, as in the adult, acromegaly is a pluri-glandular syndrome.

J. D. ROLLESTON.

Cyst of the pituitary gland with pressure symptoms; operation; recovery (*'Austral. Med. Journ.,'* 1912, 1, p. 748).—**J. R. Lee** describes the case of a girl, aged 10 years, suffering from symptoms of diabetes insipidus, bitemporal hemianopsia, and some symptoms of acromegaly. Operation revealed a cyst of the pituitary gland. The cyst was opened and lightly scraped and the cavity swabbed out with pure peroxide of hydrogen. All the symptoms disappeared, and recovery took place.

F. R. B. ATKINSON.

Abnormal physical and sexual development in an infant probably due to a pineal tumour, (*'Arch. of Ped.,'* 1913, xxx, p. 179).—**J. L. Morse** records a case in a male child, aged 23 months, who had begun to grow very rapidly when he was 6 months old. Body length, 98 cm. (normal, 82.8 cm.); circumference of head, 52 cm. (normal, 48.2 cm.); circumference of chest, 54 cm. (normal, 48.4 cm.); weight, 35 lb. (normal, 26.5 lb.). There were a large amount of pubic hair and a slight excess of hair in axillæ. Penis measured $7\frac{1}{2}$ cm. when flaccid and 10 cm. when erect. Testes were the size of robins' eggs. There were no signs of sexual feeling and no spermatozoa in the urine. Blood-pressure 85 mm. Fundi and cranial nerves normal. Intelligence that of a child of 16 months. X rays showed a bony development corresponding roughly to that of a child aged $6\frac{1}{2}$ years. The sella turcica was not enlarged, and the absence of enlargement of hands and feet and the marked development of sex characteristics excluded pituitary tumour or hypersecretion. It was, however, impossible to determine whether the disease lay in the pineal gland or in the adrenals.

J. D. ROLLESTON.

Delayed development in a boy treated with thymus gland (*'Amer. Journ. Med. Sci.,'* 1912, cxliv, p. 219).—**C. G. Kerley** and **S. P. Beebe**.—A boy at the age of 16 years was 56 in. high and weighed 76 lb.—the measurements of a boy of 12. The penis was small and shrunken, the testes very small; there had never been any erection and there was neither pubic nor axillary hair. Fifteen grains of desiccated thymus extract daily were ordered to the exclusion of all other medication. During the first six months of treatment the genitals enlarged, and after nine months, at the age of 17 years and 10 months, the first erection occurred. After a year's treatment he had gained 1 in. in height and 11 lb. in weight, and hair appeared on the pubis and in the axillæ. During the next six months of treatment he gained another 2 in. and $8\frac{1}{2}$ lb. in weight. The voice changed when he was 18 years and 4 months.

J. D. ROLLESTON.

Enlargement of the spleen in infancy (*'Thèses de Paris,'* 1911-12, No. 437.)—**Mlle. F. Le Scornet**.—Of 1143 children in Marfan's service at the Hôpital des Enfants malades, 152 cases, or 13·2 per cent., had some enlargement of the spleen: 64 of these showed more or less certain evidence of heredo-syphilis, 32 similar evidence of tuberculosis, 17 were suffering from prolonged infections, such as prolonged pneumonia or multiple abscesses, 10 from chronic digestive disturbances, and the rest were not classified. Of the syphilitic cases 73 per cent. were younger than six months, whereas only 27 of the tuberculous cases were below that age. Enlargement of the spleen does not add to the gravity of the prognosis in any of the cases except the tuberculous, in which it is of very grave import. Brief histories of 129 cases are given.

J. D. ROLLESTON.

Addison's disease (*'Lancet,'* 1913, i, p. 449).—**Frederick Langmead** describes a case in a boy, aged 10 years. The patient died four hours after admission to hospital. About twelve hours before, vomiting had started abruptly and was accompanied by restlessness and followed by loss of consciousness. The elbows, wrists and knees became rigidly flexed. The abdomen was retracted. Frequent convulsive seizures occurred until death. Cerebro-spinal fluid withdrawn by lumbar puncture was normal. The pigmentation was no more than a slight diffuse brownness of the skin, which, it was learnt from the mother, had been present for about twelve months. The child had been subject to attacks of diarrhœa for "several months" and had got gradually weaker. *Post-mortem*.—The suprarenal glands were found to be replaced almost entirely by fibro-caseous material which proved to be tuberculous under the microscope. There were considerable enlargement of the spleen and some hyperplasia of other lymphatic structures. A specially interesting point was the smallness of the heart, clearly due to a true hypoplasia, the result of gradual diminution of the vascular tension. From a study of the literature it appears that in children a greater proportion of cases of Addison's disease run a very acute course than in adults. The pigmentation is usually less obvious, and death from convulsions and coma would appear to be relatively more common.

AUTHOR'S ABSTRACT.

Acute suprarenal insufficiency in epidemic infectious diseases (*'Arch. de méd. et de pharm. mil.,'* 1912, LX, p. 13).—**J. Chauliac** records four cases of scarlet fever in soldiers who developed signs of acute suprarenal insufficiency, viz. low blood-pressure, abdominal pain with diarrhœa and vomiting, somnolence, prostration, and a relatively low temperature. Two died, while two who were treated by oral administration of adrenalin rapidly recovered (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1912, IX, p. 324).

J. D. ROLLESTON.

The rôle of the suprarenals in the pathology and treatment of diphtheria and other infectious diseases (*'Jahrb. f. Kinderheilk.,'* 1912, LXXVI, Erg.-Heft., p. 200).—**W. Moltschanoff** examined the suprarenals of forty-two children, twenty-nine of whom had died from diphtheria, six from scarlet fever, and the rest from other infectious diseases. He also examined the suprarenals of two children who had died from accidents, and the suprarenals of guinea-pigs killed by diphtheria toxin. In all the diphtheria cases there were extensive hyperæmia and occasionally small hæmorrhages, especially in the medulla. The degree of the vascular lesions

depended, not on the duration, but on the severity of the disease. Mixed infections, such as measles and diphtheria, increased the vaso-motor lesions. The changes in the cells varied, and depended on the duration of the disease. The author's conclusions are as follows: (1) The rôle of the suprarenals in diphtheria is very important and complicated. (2) The suprarenals take an active part in combating the diphtheria toxin, although at present the exact nature of this rôle is uncertain. (3) In the initial stage of diphtheria the suprarenals show increased functional activity, which in severe degrees of intoxication leads to exhaustion and atrophy of the cells. (4) This atrophy, associated with well-marked circulatory disturbances in the gland, is the cause of the diminution of the functional activity of the suprarenals in severe cases of diphtheria. (5) Acute functional insufficiency of the suprarenals causes a number of severe symptoms in diphtheria, and may lead to the death of the patient. (6) Adrenalin is a powerful agent for raising the depressed cardio-vascular tone in infectious disease.

J. D. ROLLESTON.

Dermatology and Syphilis.

Ritter's disease (*'La Pédiat.'* 1912, x, p. 353).—**P. Sorgente** describes fully two cases of this disease (dermatitis exfoliativa neonatorum) in children aged 16 days and 2 months, with illustrations of sections of the skin. In the second case the desquamation was at no time preceded by bullæ or redness of the skin, and the cutaneous changes were more superficial, indicating that the congenital weakness of the skin resided principally in the epidermic layers, and lending support to the view of Kaposi and others that this condition is merely an exaggeration of the physiological phenomenon of desquamation in the newborn. In the other case the author credited alcoholism in the mother as a possible cause, while the fact of her having suffered from scarlatina in the eighth month of pregnancy was significant. Sorgente concludes that in the present state of our knowledge this disease, from a clinical point of view, must be classed among those of acute pemphigus in the newborn, of which it represents a grave type. Unlike acute pemphigus, however, it may be produced not only by parasitic causes, but also by factors mainly or exclusively toxic, or simply by mechanical irritants. The histological changes in the skin may vary considerably in intensity and depth. Some essential predisposing cause, such as congenital weakness of the skin, must be admitted. The disease is very serious, but not absolutely fatal.

VINCENT DICKINSON.

Three cases of family dystrophy of the hair and nails (*'Journ. Amer. Med. Assoc.'* 1913, LX, p. 27).—**J. S. Eisenstaedt** reports the history of three brothers, aged 14, 9, and 1 year respectively, who all present an atrophy of the hair and nails. On the scalp is a moderate growth of pale downy hairs, none of which is over two or two and a half inches in length. The hairs grow very slowly. The ends are pointed, and none is split or broken off. They are very easily removed and do not break on traction. There seems to be some anomaly in their implantation. Here and there at wide intervals are normally implanted coarser brown hairs. Microscopically the hairs present nothing abnormal, and no parasites were found. The eyebrows are very poorly developed, only a small number of lanugo hairs being present. The eyelashes are extremely sparse and pale, and there is no trace

of axillary or pubic hair. The distal phalanges of the hands are increased in volume and the skin over them is thickened. The nails show an enormous hypertrophy of the nail-bed, and are kept short as they are brittle and tend to crack. There is no paronychia. The toe-nails are affected in a similar manner, but to a less degree. There are five other children in the family, but none of them is similarly affected, and there is no sign of hereditary syphilis. The condition has been present in the four previous generations of the family, both males and females having been affected. The author suggests a possible relationship between the condition and acanthosis nigricans, especially as the mother, who was affected, died from some malignant abdominal growth.

T. R. WHIPHAM.

Abnormal tuft of hair and plica neuropathica (*'Urol. and Cut. Rev.,'* 1913, xvii, p. 78).—W. Knowsley Sibley reports a case in a girl, aged 11 years, who was born with a hairy growth over the sacral region. The child was healthy and had no other congenital abnormalities. She was brought to hospital because parts of the tuft were matted together and could not be combed out. Microscopical examination showed the matting to be due to the hairs being encircled by numerous linen fibres. The writer proposed to destroy the growth permanently by repeated applications of full doses of X rays.

J. D. ROLLESTON.

Mongolian spots (*'Osp. d. Bamb. d. Milan.,'* 1912, i, p. 111).—I. Cacciani.—Out of 2000 children between the ages of one month and six years examined at the Milan Children's Hospital between April, 1911, and June, 1912, 22 showed these spots in the lumbo-sacral region. In one of these there was also a spot on the right shoulder, and in another two spots on the tibiae. The size, shape, number and colour varied. They might be as small as a centime or as large as the palm of the hand. In shape they were circular, oval, or horse-shoe. Their number ranged from one to five; their colour might be bluish-grey or dark blue.

J. D. ROLLESTON.

Urticaria treated with epinephrin (*'Amer. Journ. Med. Sci.,'* 1913, cxlv, p. 373).—A. W. Swann records six cases of urticaria, all but one of which occurred in children aged from $3\frac{1}{2}$ to 10 years, in whom subcutaneous injection of adrenalin solution (mij-iv) was followed by rapid disappearance of the erythema and the wheals. The dose was repeated in ten minutes, and the two doses sufficed in each case to cause complete fading of the rash. In the three most severe cases, which were all serum rashes, the wheals began to reappear from one to two and a half hours after the first dose of epinephrin. In every case but one the wheals began to fade after a marked rise in blood-pressure had occurred and continued to fade while the pressure was rising or was still above normal. Swann suggests that the treatment might be useful in other similar but more serious conditions, e.g. angioneurotic oedema, oedema glottidis or anaphylaxis with severe bronchial spasm and oedema.

J. D. ROLLESTON.

Infantile eczema (*'Journ. Amer. Med. Assoc.,'* 1912, lviii, p. 995).—C. A. Simpson.—Baths of every kind should be forbidden. In acute cases fomentations of resorcin and acetate of aluminium (10 gr. of resorcin, $\frac{1}{2}$ pint of water, acetate of aluminium, two table-spoonfuls in 250 c.c. of water) may be employed, and if these fail then rice-powder well powdered several times a day should be used. When the dry stage is nearly reached, one of the

following ointments is valuable: 3-5 per cent. of boric petrolatum or unguentum vaselin plumbicum. The latter is made as follows: Petrolatum is added in equal quantity to plumbi oxidi zij , olei olivæ zxxv , olei lavandulæ zij , aq. *q.s.* to make a rather stiff ointment. If either of these fail, then Lassar's paste is in place. When absolute dryness results and hyperæmia is less pronounced, then the following lotion is of value: Zinc oxide and starch $\text{aa } \text{z}\text{v}$, glycerini zij , aq. destill. zij . If there is marked itching some form of tar should be used, as liq. carb. deterg. zij , zinc oxide zv , glycerini $\text{z}\text{v}\text{ij}$, aq. destill. zij , or oil of cade, birch tar, or beechnut oil. The amount of tar must be very small at first. The author recommends particularly anthrasol 25 drops, lanolin $2\frac{1}{2}$ oz., starch and zinc oxide, each 5 drms., and also lenigallol or thiol. Vaccine treatment has proved disappointing.

F. R. B. ATKINSON.

Lupus erythematosus in a girl, aged 9 years (*Hospitalstidende*, 1912, LV, p. 1359).—**C. Rasch**.—The father had died of tuberculosis six years previously, a sister was tuberculous, and the patient herself had had tuberculosis of the bones of the foot for six years. The skin affection had begun six months previously and involved the nose, both cheeks, hands and feet. Von Pirquet positive. A cure was affected by salicylic plasters and Finsen light treatment.

J. D. ROLLESTON.

Rodent ulcer of the back in a boy of twelve (*Brit. Journ. Derm.*, 1912, XXIV, p. 391).—**J. H. Sequeira**.—The boy had had a "mole" over the left scapula since he was two years old. It grew very slowly until he received a severe blow on it two months before admission, when it grew rather rapidly. On admission there was a rounded flat swelling on the back the size of a sixpence, three quarters of an inch above the inferior angle of the left scapula. A dry crust covered the middle of the growth, which had all the clinical characters of rodent ulcer. Microscopical examination confirmed the diagnosis. Cure followed the application of 16 mgrm. of radium.

J. D. ROLLESTON.

The chronic purpuras of childhood (*Gaz. des Hôp.*, 1912, LXXXV, p. 2113).—**Deléarde** and **G. Hallez** divide purpuras into the chronic hæmorrhagic and the chronic simple types, and relate in detail a case of the former, which lasted two months. The cause was obscure; visceral lesions seemed absent, especially in the liver and kidney. There was no albuminuria; elimination of methylene blue and urinary ingredients was normal. There was no alimentary glycosuria or hypoazoturia, and the slight urobilinuria found was due to the absorption of the extravasated blood. The heart, pulse, and arterial tension were normal. The blood was normal in corpuscles and coagulation-time. The symmetry of the eruption, which only appeared on the limbs, suggested a nervous origin, but there was no evidence of nerve disease. The case was evidently one of so-called chronic simple purpura, some varieties of which appear to have a rheumatic origin, while some are called orthostatic when they come on after slight fatigue. To these varieties one may add those which arise in the course of nervous diseases, but these are most usual in adults, and the same may be said for those that occur in arteriosclerosis. Possibly the infantile cases are due to a special fragility of the small blood-vessels. Chronic hæmorrhagic purpura is more frequently seen in children than the other type. Here the eruption affects the mucous membranes as well as the skin, leading to hæmorrhages. There is generally

a blood-change, a diminution of hæmatoblasts and a want of shrinkage of blood-clots. It is chiefly seen between the ages of six and fifteen, and is more common in girls. The most frequent hæmorrhage is epistaxis. It is often intermittent, with long intervals of health. Out of thirty-six cases there were seven of tubercle and five of suspected tuberculosis. Vaso-constrictors such as adrenalin, hamamelis and tannin are useless. Chloride of calcium deserves a trial. Weill has found subcutaneous injections of fresh horse-serum useful. Nobécourt and Tixier have used subcutaneous injections of Witte's peptone and chloride of sodium.

J. PORTER PARKINSON.

A small epidemic of an areata alopecia (*Brit. Journ. Derm.*, 1913, xxv, p. 51).—**T. Colcott Fox**.—The epidemic occurred at the Bethnal Green schools. Twenty-one girls, aged from 9 to 14 years were affected. All the cases were seen in an early stage. The patches of alopecia ranged from the size of a finger-nail to a shilling. In almost all there was only a single patch, which might be located in any part of the scalp. Repeated examination of the hairs was negative and no organisms could be cultivated. Rapid cure followed the application of ung. hydrarg. ox. rub. with cantharides.

J. D. ROLLESTON.

Sodium carbonate in ringworm (*Brit. Med. Journ.*, 1913, i, p. 498).—**W. W. Nock** advises sodium carbonate in ringworm. A piece of sodium carbonate is taken and one end of it is melted. The melted end is freely rubbed into the ringworm, and particularly thoroughly if it is in the scalp, which must have the hair round cut short. One application is sufficient on the body, but on the scalp it may be necessary to repeat it six or seven days later. Usually no dressing is necessary, though if sore, boric acid ointment may be used. The treatment is painless and leaves no permanent mark.

J. ALLAN.

Iron perchloride in ringworm of the scalp (*Brit. Med. Journ.*, 1913, i, p. 390).—**J. H. Garrett** advises that strong perchloride of iron should be dabbed on the scalp with a camel-hair brush until the scalp is thoroughly stained with it. The patches affected should be treated every second day for three times, afterwards every third day for six times, when the cure will generally be effected, although the disease has been very extensive. The head should not be often washed during the treatment.

J. ALLAN.

Anti-streptococcus serum in treatment of vaccinal ulcers (*Arch. of Ped.*, 1913, xxx, p. 139).—**L. A. Sexton** recommends the local application of this serum for indolent vaccinal ulcers. The wound is filled with serum, covered with a small dressing of the same, over which is placed oiled silk. The dressing is re-moistened three or four times daily without being removed. Rapid healing always takes place.

J. D. ROLLESTON.

Diagnosis of congenital syphilis (*Practitioner*, 1913, xc, p. 624).—**H. L. McCarthy** has tested the serum reaction in 57 cases: 16 children under four years of age, with manifest congenital disease, all gave a positive reaction. Of 14 cases suffering from early rickets in which a syphilitic taint was suspected from the family history, a positive reaction was present in 9 cases. Of 27 older children, with well-marked signs, a positive reaction was

present in 22 cases. He considers a negative reaction has only a relative value, whereas a positive reaction invariably denotes the presence of syphilis.

F. R. B. ATKINSON.

Congenital syphilis with marked anæmia (*'Hospitalstidende,'* 1912, LV, p. 1359).—**C. Rasch**.—An infant, aged 1 month, whose mother had been infected during pregnancy, in addition to the ordinary signs of congenital syphilis, presented marked pallor of the skin. Blood examination was as follows: Hæmoglobin, 40 per cent.; red cells, 1,400,000; poikilocytes (about five in a field), macrocytes, no nucleated cells. White cells, 17,000. Polymorphs 28·5 per cent., large lymphocytes 8·9 per cent., small lymphocytes 54·7 per cent., transitionals 7·9 per cent., eosinophiles *nil*. Under treatment with calomel and perchloride of iron some improvement took place, and the hæmoglobin rose to 50 per cent. While a slight degree of anæmia in congenital syphilis is not uncommon, so severe a case is extremely rare.

J. D. ROLLESTON.

Syphilitic disease of bones and joints in children (*'Med. Press and Circ.,'* 1913, I, p. 333).—**O. L. Addison**, in discussing some of the commoner bone and joint affections met with in childhood, points to the importance of carrying out the Wassermann reaction. He emphasises the frequency with which the ordinary accepted signs of congenital syphilis were absent in these cases, and the lesion for which the child was brought up was the only sign of the disease to be found.

J. ALLAN.

Pneumo-bacillus septicæmia with severe suprarenal hæmorrhage in congenital syphilis (*'Jahrb. f. Kinderheilk.,'* 1913, LXXVII, p. 190).—**E. Conradi**.—A premature newborn child was admitted to hospital for umbilical suppuration. The skin of the whole body, especially the face, was markedly yellow, but there was no definite icterus. There were profuse purulent rhinitis and superficial ulceration of the hard palate. The skin of the face and trunk showed brownish red spots, some of which were scaly. Temperature subnormal. Death preceded by marked cyanosis took place the following day. Post mortem the suprarenals were found to be of a dark blue colour and each about the size of a cherry. On section all but a narrow strip of cortex was filled by a dark red hæmorrhage. A pure culture of pneumo-bacilli was obtained from the heart and spleen. The lungs were normal. The umbilical cord was probably the source of infection, though the nostrils and palate could not be excluded. A review of the literature is given, reference being made to Waterhouse's case (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1911, VIII, p. 24).

J. D. ROLLESTON.

Interstitial keratitis (*'Dub. Journ. of Med. Science,'* 1913, I, p. 87).—**F. A. Anderson** contends that this disease is frequently caused in subjects of inherited syphilis by a super-imposed infection with the tubercle bacillus. The author urges the routine use of the tuberculo-diagnostic test in all cases that present themselves for treatment. Of the various diagnostic methods for tuberculosis that by the subcutaneous injection of Koch's old tuberculin is of most value in these cases. Anti-specific treatment should be combined with tuberculin therapy, small doses of tuberculin being given at long intervals.

J. ALLAN.

Spirochætes in the viscera of a newborn infant whose mother had received an intravenous injection of "606" during pregnancy. Streptococcic septicæmia in a heredo-syphilitic suckling (*Gaz. hebdomadaire des Sci. Méd. de Bordeaux*, 1913, xxxiv, p. 87).—**Dupérié** reports the case of a premature infant born at the seventh month with pemphigoid bullæ on the legs and feet. The infant died of erysipelas a month afterwards. The mother suffered from secondary syphilis and was treated with protiodide pills, and afterwards with an intravenous injection of 0.30 grm. salvarsan, six days before the infant was born. Silver preparations showed the presence of numerous spirochætes in the infant's liver, a few in the suprarenals, but none in the other organs. Streptococci, on the other hand, were found in all organs. A few of the spirochætes were normal in shape, but most of them irregular. The author draws attention to three points in the case: (1) The action of salvarsan on the fœtus; (2) the action of salvarsan on the morphology of the spirochæte; (3) the addition of streptococcic septicæmia to a congenital infection with spirochætes. The injection of salvarsan may have determined the premature labour. Similar cases have been reported by Salmon, Sauvage and others when this drug was injected in the later months of pregnancy. In some cases injection of salvarsan appears to have caused death of the fœtus *in utero*, but in these the spirochæte was not found in the fetal organs. However, according to Sauvage, 92 per cent. of the infants are born alive and usually without symptoms of syphilis. But this is only a false security, for symptoms of syphilis soon appear, and the infants are only "whitewashed" by maternal treatment. The author attributes the irregular and atypical form of most of the spirochætes to the action of salvarsan, not to modification of the soil by streptococci, because he has observed a case of a newly born syphilitic infant, which died of septicæmia (apparently due to *B. coli*), in which the spirochætes were normal. He states that salvarsan can pass the placenta (Bonnaire), and that it has been experimentally shown that it causes the spirochætes to become irregular, moniliform, and finally granular, the granules becoming the prey of the phagocytes (Levaditi, etc.) In conclusion, he considers that the case does not prove the failure of treatment of the fœtus through injection of the mother with salvarsan, because of the apparent effect on the spirochætes. It also shows the danger of secondary infection in cases of heredo-syphilis.

C. F. MARSHALL.

The future of the premature and its connection with hereditary syphilis (*Thèses de Paris*, 1911-12, No. 308).—**Detré** has investigated 205 cases of premature birth and compared them with other infants born at term in the same environment. He first points out the high mortality, which is shown by the small number of premature births (4.9 per cent.) among the sum total of observations, in relation to the frequency of prematurity, which is stated to be about 30 per cent. As regards the causes of prematurity, hereditary syphilis takes a prominent place according to the evidence of the Wassermann reaction, in which the author apparently places implicit faith. He states that hereditary syphilis may only show itself by retarded growth (with a positive Wassermann reaction). Another important factor is tubercle, for the premature infants of tuberculous parents are particularly exposed to contagion. The author has observed severe rickets in such cases, especially when tubercle is combined with hereditary syphilis. As regards the future of the premature, he states that the proportion who compare favourably with healthy children born at term is only 8.6 per cent.

in the first, and 10.5 per cent. in the second infancy. Even after eliminating syphilis, tuberculosis and faulty alimentation, the premature appear to be deficient both in weight and height. Detré draws attention to the bearing of this on the premature induction of labour, and suggests that this practice may be detrimental to the individual and the race.

C. F. MARSHALL.

Reviews.

THE ELEMENTS OF CHILD PROTECTION. By SIGMUND ENGEL. Translated from the German by Dr. EDEN PAUL. Pp. 269. London: George Allen & Co., 1912. Price 15s. net.

THIS book is written from the standpoint of the socialist and the modern social worker. The arguments of the anti-socialists are clearly and fairly stated, and convincing proofs are given of the soundness of the socialist attitude as regards individual welfare and the health of the community.

The first chapters deal with the problems of population and the high birth-rate of the working classes. In this country the experience of most medical men seems to contradict the author's statement that only a small proportion of the proletariat suffers from venereal infection. The prevention of conception among wage-earners is strongly advocated, apparently on the ground that it is less immoral than the procreation of children who cannot possibly be fed, clothed and protected by their parents. In the chapter on infantile mortality the author forcibly proves that the unequal distribution of wealth is the main cause of this scourge, as socialist writers and speakers in this country have shown for many years. In the chapter on education the evils of corporal punishment are exaggerated. Professor Stanley Hall, among other authorities, considers castigation useful in the case of boys, especially for sexual offences. Probably flogging is more degrading to the teacher than to the scholar.

Among the arguments in favour of child protection and the prevention of infantile mortality, it is stated that the survival of the weakly in body often secures the survival of persons in whom the intellectual and moral faculties are highly developed. Again, a high death-rate among infants implies a high disease-rate among the survivors, who are likely to develop tuberculosis and be unfit for military service to a greater degree than those born in a year of low infantile mortality.

An interesting statement is made to the effect that if a high infantile mortality-rate exercised a selective influence, the death-rate among children over a year old among the proletariat should be less than that of upper-class children of the corresponding age, but this is nowhere the case.

It is advocated that marriage should only be allowed to those certified by a physician as physically and mentally sound, and it is considered that individual liberty would not be unjustifiably imperilled thereby, as many modern States and public bodies require celibacy in their employés. Dr. Engel thinks that illegitimacy and venereal disease would not be increased, but could be prevented by punitive measures and public enlightenment.

As regards the care of illegitimate children, it is recommended that a

strict inquiry should be made into the paternity, and that a proper maintenance allowance for the child, as well as the mother's expenses in childbed, should be exacted from the father. Every illegitimate child should be provided with an official guardian, a salaried servant of the poor law authority, who could enforce payment from the parent, and would be in a good position in after years to find satisfactory employment for the child at a suitable age.

The view that infant milk depôts do more harm than good by encouraging maternal laziness, and by promotion of artificial feeding, is qualified by urging the absolute necessity of medical supervision and their conversion into infant consultation centres. Factory crèches, or rooms in which the babies are kept under skilled superintendence, and to which the working mother resorts at suitable intervals to suckle her child, are spoken of with high commendation.

The question of the provision of free meals for children is settled by stating that it is the logical outcome of free education, and, therefore, food should be provided for all the children in attendance. Child labour is condemned on account of its low rate of remuneration, its monotonous character, and the evil effect it exercises on the process of manufacture. As long as child labour is obtainable, the manufacturer does not bother himself with the invention of labour-saving appliances.

A chapter is devoted to prostitution, wherein the author explains that the housing conditions of the proletariat, whereby all the physiological functions of both sexes are performed in one or two rooms, rather than destitution, predispose to this evil.

Enough has been said to show the scope of this book and its wide appeal to all social workers. Perhaps in future editions the value of this work to medical readers will be enhanced by full statistical justification of the author's statements and detailed reference to the papers of other workers.

In conclusion, we would congratulate the author, not only for having written an instructive and suggestive book, but also for his good fortune in having secured Dr. Eden Paul as his translator.

C. R.

HYGIÈNE DE L'ENFANCE. By Dr. E. APERT, Médecin de l'hôpital Andral. With 81 illustrations. Paris: J. B. Baillière et fils, 1913. Pp. 416. Price 6 fr. (paper cover).

DR. APERT has written a semi-popular book which should be of great assistance to mothers and nurses—those of them, that is to say, who can read French. Many a young practitioner, too, will doubtless be able to gather useful hints from a perusal of its pages. The work deals almost entirely with the hygiene of the child, and no attempt is made to give a full account of the various disorders of infancy. The author, to use his own words, aims merely at showing how the common diseases of children can be avoided as far as possible, and when this is not possible, how their severity may be lessened and evil consequences averted.

Dr. Apert's advice throughout is sound and practical, and is illustrated by numerous reproductions of photographs, which serve to enhance the usefulness of the book. Part I deals shortly with the development and general physiology of the child at different ages, and more fully with the various methods of feeding. Further chapters are devoted to clothing, housing, and the care of the body generally, the last including an instructive section on the advent of puberty. Games and exercises and education are also

dealt with in a very practical and useful manner. Part II concerns the hygiene of the sick child and the sick-room. The methods of administering medicines, baths, packs, enemata, etc., are given in detail, together with several useful recipes for feeding. Then follow accounts of the common disorders and injuries of children with their initial treatment, and a chapter on the prophylaxis of the various infectious and contagious diseases. To limit the spread of infection in hospital the author favours Grancher's method of isolating every suspicious case in a wire frame-work. In the case of measles, every child who has not had the disease should be treated as a suspect for the first sixteen days. An elaborate but very necessary system of closet accommodation is also advocated. The treatment given for the various conditions is safe and adequate, and the necessity for calling in the physician, when the symptoms are urgent, is fully insisted upon.

The book is well got up, and the illustrations are good. There is only one misprint of any importance, which occurs in figures on page 308. At the end there is an efficient index, together with a table of contents.

T. R. W.

THE CONSERVATION OF THE CHILD: A MANUAL OF CLINICAL PSYCHOLOGY, PRESENTING THE EXAMINATION AND TREATMENT OF BACKWARD CHILDREN. By ARTHUR HOLMES, Ph.D., Assistant Director of the Psychological Clinic and Assistant Professor of Psychology, University of Pennsylvania. Philadelphia and London: J. B. Lippincott Company, 1912. Pp. 345. Price 4s. 6d. net.

THOSE responsible for the provision and control of education in this country are gradually awakening to the fact that children exist who, for various reasons, are so abnormal that they are unable fully to profit by the education supplied. A system of medical inspection has already been devised for the investigation of physical conditions. Doubtless, in due course, it will be recognised that the nature of a child's mental action is not unimportant, and then we may hope to see some attention paid to the subject from the psychological aspect. Things are very different in the United States. Sixteen years ago a psychological clinic was established in the University of Pennsylvania, having for its objects the scientific investigation of children unable to make satisfactory school progress and the giving of suitable advice as to particular methods of training such scholars. And this has been the forerunner of many similar clinics.

In this book the aim of the author is to give a practical description of the inauguration and operation of such a psychological clinic. Dr. Holmes not only does this very well, but he also gives information regarding classification and the characteristics of children suffering from the various forms of mental and moral deviation, which, besides being very interesting, cannot fail to be of use to those having to do with the education of such persons. The book is profusely illustrated, there is a very full account of all the chief tests and methods of examination in ordinary use, and those who wish to see how a psychological clinic is run or to obtain a knowledge of such methods of examination, together with much useful information regarding abnormal children, should certainly read this manual. We regard it as supplying a distinct want, and there is only one serious defect to which attention may be drawn in the hope that it will be remedied in a subsequent edition—that is, the absence of an index.

A. F. TREDGOLD.